



5

Superfund Records Center

SITE: Jard Co

BREAK: 1

OTHER: 563916

PHASE 2 ENVIRONMENTAL SITE

ASSESSMENT

JARD COMPANY PROPERTY

BENNINGTON, VERMONT

Prepared For

LAURENCE LEVY, INC. TRUSTEE

700 Centre, Suite 901

700-704 East Franklin Street

Richmond, Virginia

February 1991

Wehran Engineering Corporation

Burlington, Vermont

Environmental Engineers • Scientists • Constructors

February 21, 1991

Wehran Engineering Corporation
Chace Mill 3-20
1 Mill Street
Burlington, Vermont 05401
Tel: 802-658-6884
Fax: 802-658-5014

Laurence H. Levy, Trustee
700 East Franklin Street
Suite 901
Richmond, VA 23219

Re: Phase 2 Environmental Site Assessment
Jard Company Property, Bennington, Vermont
WE Project No. 00272.01

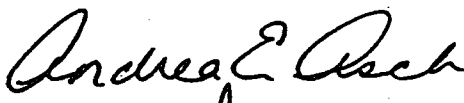
Dear Mr. Levy:

Wehran Engineering is pleased to provide you the enclosed Phase 2 Environmental Site Assessment. The environmental assessment provides the findings from the investigation conducted at the Jard Company located in Bennington, Vermont.

If you have any questions, please call our office.

Sincerely,

WEHRAN ENGINEERING CORPORATION


John A. Malter
Office Director

AEA/wlg

PHASE 2 ENVIRONMENTAL SITE
ASSESSMENT

JARD COMPANY PROPERTY
BENNINGTON, VERMONT

Prepared For
LAURENCE LEVY, INC. TRUSTEE
700 Centre, Suite 901
700-704 East Franklin Street
Richmond, Virginia

February 1991

Wehran Engineering Corporation
Burlington, Vermont

Environmental Engineers • Scientists • Constructors

TABLE OF CONTENTS

	<u>Page Number</u>
1.0 INTRODUCTION	1-1
1.1 PREVIOUS WORK	1-1
1.2 OBJECTIVES	1-2
2.0 GEOPHYSICAL SURVEY	2-1
3.0 SOIL SAMPLING	3-1
3.1 OFFSITE SURFICIAL SOILS	3-1
3.2 ONSITE SOIL SAMPLING (Test Pits)	3-1
4.0 GROUNDWATER SAMPLING	4-1
4.1 WATER LEVEL MEASUREMENTS	4-2
5.0 RESULTS AND CONCLUSIONS	5-1
6.0 RECOMMENDATIONS	6-1

LIST OF TABLES

<u>Table No.</u>		<u>Follows Page No.</u>
5-1	Test Pit Soils - Chemical Data Summary	5-1
5-2	Test Pit Water Samples - Chemical Data Summary	5-1
5-3	Groundwater Chemical Data Summary	5-1
5-4	Groundwater (Oil Phase) Chemical Data Summary	5-1

LIST OF FIGURES

<u>Figure No.</u>		<u>Follows Page No.</u>
1-1	Site Location Map	1-1
2-1	Geophysical Traverse Lines	2-1
3-1	Soil and Groundwater Sampling Locations	3-1

APPENDICES

- Appendix A – Test Pit Logs
- Appendix B – Monitoring Well Construction Diagrams
- Appendix C – Test Pit Soil Chemical Data
- Appendix D – Test Pit Water Quality Data
- Appendix E – Groundwater Chemical Data

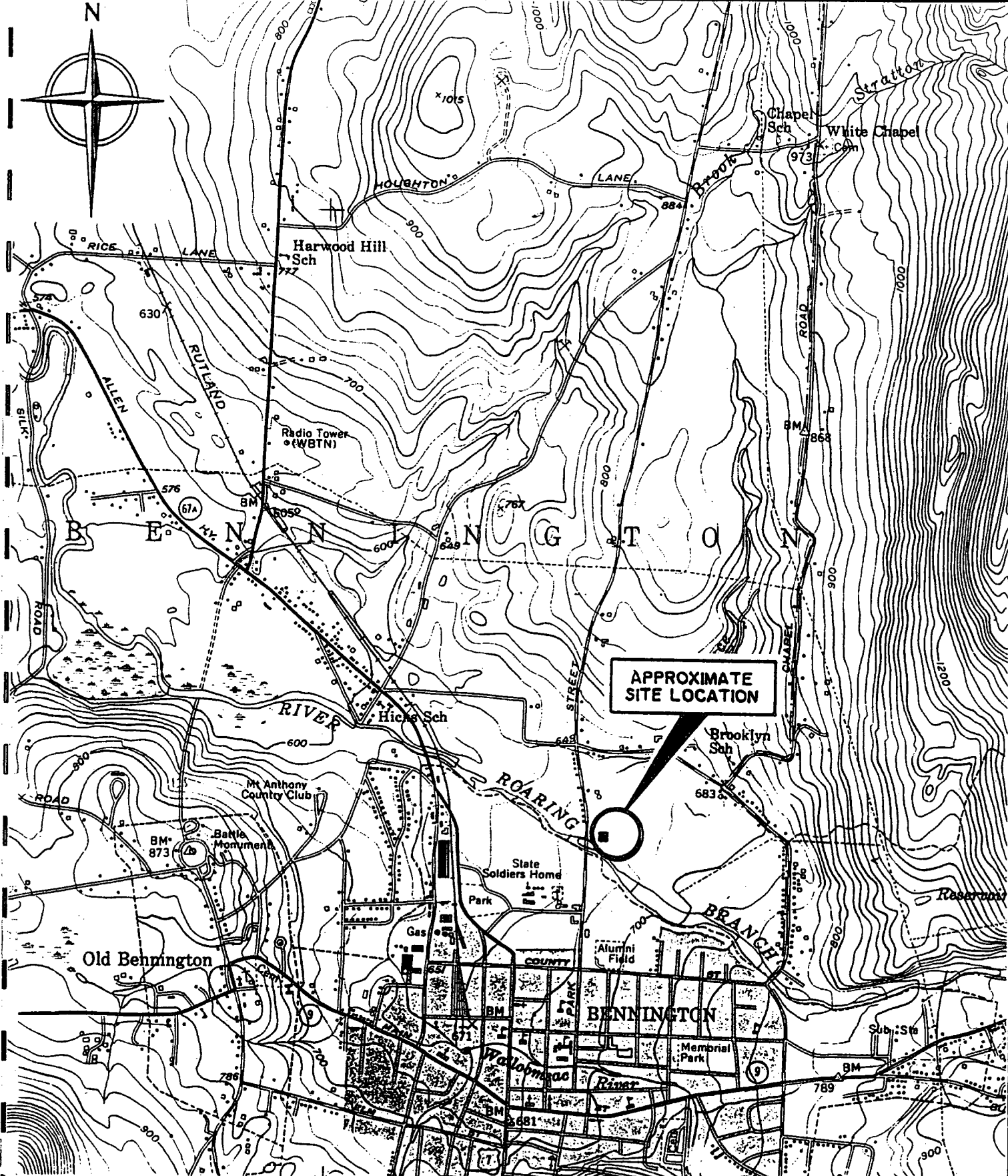
1.0 INTRODUCTION

Wehran Engineering has completed a Phase 2 environmental site assessment for a 12 acre parcel belonging to the Jard Company, Inc., on Bowen Road in Bennington, Vermont. Phase 2 work included a ground-penetrating radar survey of the site, offsite surficial soil sampling, onsite excavation of test pits and installation of groundwater monitoring wells, and evaluation of the results of these tasks.

1.1 PREVIOUS WORK

The Jard Company is located on Bowen Road in Bennington, Vermont (Figure 1-1). The company owns 34 acres of property, including the 12 acres (containing the facility) which are the focus of this assessment. Jard was established in 1969 as a manufacturer of small capacitors, small non-fluid transformers, and small motors. Up to 250 employees (in three shifts) have been involved in plant operations. The plant ceased operations in early 1989.

In order to investigate the potential extent of contamination, Wehran was requested to conduct a Phase 1 environmental investigation in the fall of 1989. That assessment included an initial site visit, review of applicable State and local files, a site walkover, soil and water sampling and analyses, interviews with available plant personnel, and evaluation of the results. The assessment was discussed in "Draft Environmental Site Assessment for the Jard Company Property in Bennington, Vermont," prepared by Wehran in November 1989. The principal contaminants detected in onsite soils included Acochlor-1242, Bis (2-ethylhexyl) phthalate, zinc, trichloroethane, and trichloroethene. Because contamination was detected on site, a Phase 2 assessment was recommended.



JARD COMPANY
BENNINGTON VERMONT
SITE LOCATION MAP
SOURCE: USGS BENNINGTON QUADRANGLE

FIGURE I-1
Scale: 1:24000
Date: 9/17/90
Project No: 0027201

1.2 OBJECTIVES

The objectives of the Phase 2 site assessment were to:

- determine the vertical extent of contamination at known areas of surficial soil contamination;
- better define the horizontal extent of soil contamination; and
- provide initial data on the extent, if any, of groundwater contamination. This task will include defining the direction of groundwater flow from the site.

In order to meet these objectives, a scope of work was developed by Wehran and reviewed by the Vermont Department of Environmental Conservation (DEC). The tasks proposed in this scope were designed to provide data related to each of the stated objectives of the Phase 2 assessment. Specifically, the following tasks were proposed:

- **Geophysical survey.** Ground-penetrating radar (GPR) and electromagnetic induction (EMI) were proposed to help map shallow subsurface features, including buried pipes and other man-made objects, as part of an overall assessment of potential migration pathways on site. Because of the occurrence of numerous overhead and buried cables and wires and buried pipes, all of which interfere with an EMI signal, the EMI survey was not conducted. Discussion of the GPR survey is presented in Chapter 2.0 of this report.
- **Offsite surficial soil sampling.** The objective of this task was to provide data to test the assumption that surficial soils contamination is limited to the site itself. Surficial soils on adjacent open land to the south and west of the facility were collected and sampled. Chapter 3.1 discusses this task.

- Onsite soils. To estimate the extent and depth of contamination, six test pits were excavated. Locations were chosen to be either near known or suspected areas of surficial contamination. Where the water table was encountered, water samples were also collected. Chapter 3.2 discusses this task.
- Groundwater. Five monitor wells were installed to obtain groundwater samples for chemical analysis and to obtain water levels for estimating the direction of groundwater flow. This task is discussed in Chapter 4.0 of this report.

2.0 GEOPHYSICAL SURVEY

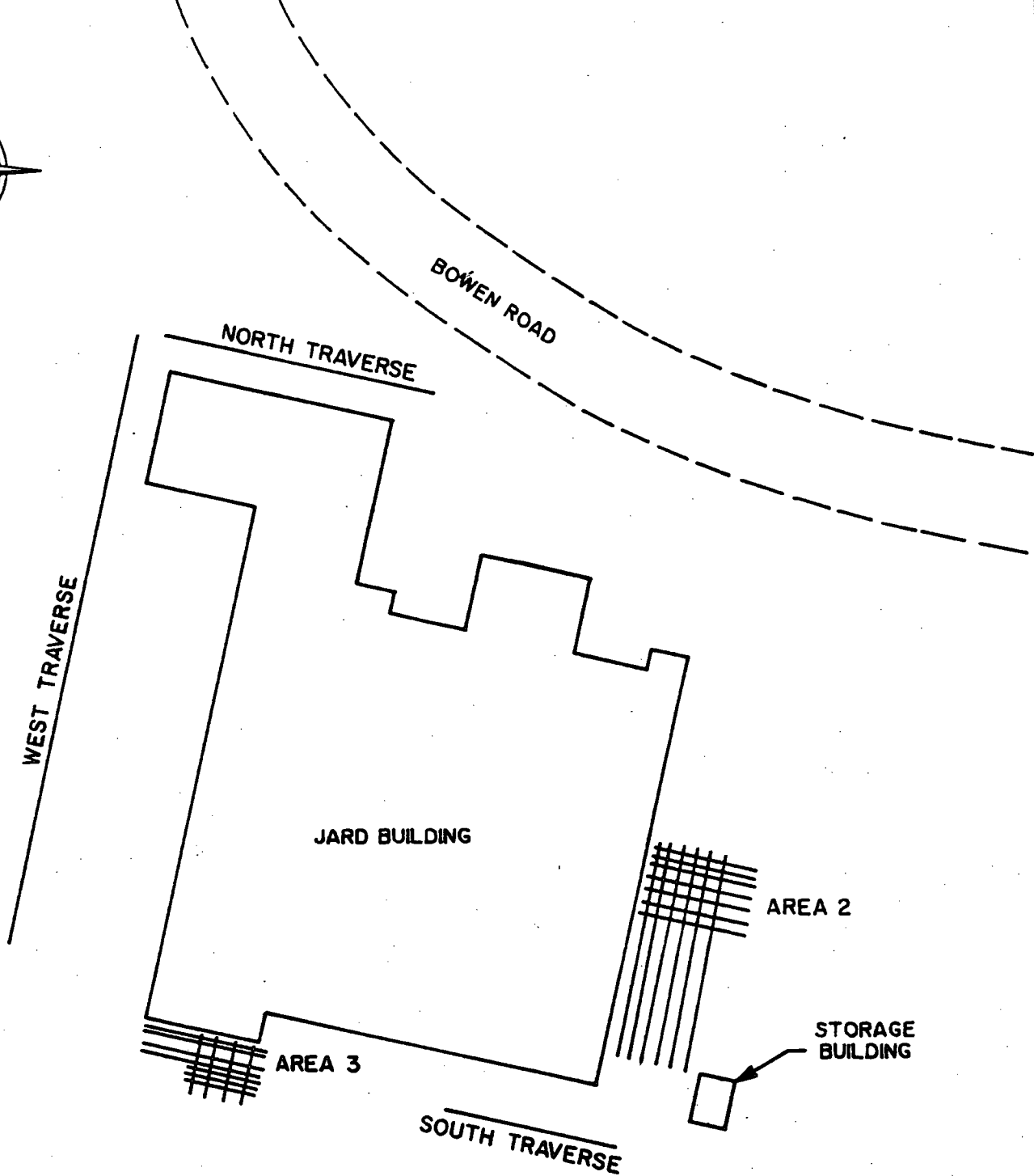
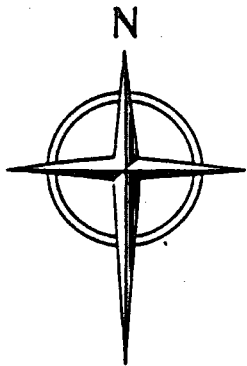
The purpose of the geophysical survey was to map shallow subsurface features, including buried pipes and other man-made objects, as part of an overall assessment of potential migration pathways on site.

The data were collected using a Geophysical Survey Systems Model SIR-8 ground-penetrating radar (GPR) unit coupled to a 50 megahertz antenna. The system operates by systematically emitting a very high frequency pulse of electromagnetic energy into the subsurface from a transceiving antenna, recording backscattered energy from the subsurface between pulse emissions. Backscattering occurs as the downward going pulse encounters contrasts in dielectric constants in the subsurface. Such contrasts are common at soil/soil, soil/rock, and soil/manmade object boundaries.

The system is most effective in dry, low conductivity environments (such as dry sand), but effective depth of investigation can be severely inhibited by high conductivity conditions (salty or brackish water, clays). Geologic materials in the site area are primarily thin, coarse-grained stratified glacial drift and stream gravels (A.L. Hodges, Jr., 1966, Groundwater Favorability Map of the Batten Kill, Walloomsac River, and Hoosic River Basins). The GPR was expected to perform effectively on the basis of this information, and very good effective depth of investigation was obtained during the survey.

The GPR traverses ran on site are shown on Figure 2 1. Areas identified in the Phase 1 investigation as possible underground conduits related to the concrete structures (dry wells) were examined with a gridwork of parallel GPR traverses. The peripheral areas were examined with a single continuous reconnaissance traverse to identify any subsurface targets not expected from examination of available site plans.

In Area 2 (see Figure 2-1), several discrete subsurface targets were noted during the GPR survey. Data from this area indicate a linear feature (less than one foot deep) that may represent either a pipe or electrical conduit near the center of



WehranEnviroTech

JARD COMPANY

GEOPHYSICAL TRAVERSE LINES

FIGURE 2-1

Scale: 1" = 80'

Date: 9/17/90

Project No: 0027201

the area. A shallow zone (0 - 4 feet deep) of attenuated signal returns is also evident toward the southerly part of the area in the vicinity of the Drum Storage Area.

Area 3 (designation refers to sampling identification from the Phase 1 report) includes a dry well and two standpipes. The standpipes are suspected to be attached to a buried tank based on information presented in the Phase 1 report. This area was examined by a series of parallel GPR traverses at about five foot separation in both north-south and west-east directions. Locations along each traverse were identified by markers introduced onto the recordings at ten-foot intervals as the recordings were made.

Several discrete subsurface targets were noted during the GPR survey in Area 3. The character of the signals suggested that pipes or other small diameter metallic objects are present in the subsurface:

- A 12-inch pipe entering the dry well from the direction of the building at two to three foot depth does not appear on the GPR recordings. A large metallic target of this nature should clearly show on the GPR recordings. Because the pipe did not appear on the GPR recordings, it is possibly not steel. Clay or concrete pipes in soil sometimes do not present sufficient dielectric contrast to result in significant backscattering of the electromagnetic signals.
- Between the building and the dry well, the GPR signal was attenuated between a depth of 10 and 15 feet. This signal change could theoretically be the result of either concentrations of organic compounds or of significant excavation in the area.
- West of the dry well, backscattering of the GPR signal from a two-foot deep soil horizon is interrupted and the signal strength is strongly attenuated. This effect is assumed related to a mechanically disturbed soil (excavated and replaced, or mixed).

- The GPR recordings near the stand pipes did not clearly indicate a buried tank. Based on information in the Phase 1 report, however, it is believed that a small storage tank is likely present below this area.

Additional traverses were run in peripheral areas surrounding the site. The traverse north of the building showed no unusual features. The traverse along the southern side of the building showed a small metallic target at about two foot depth about 55 feet from a power pole, and general signal attenuation at shallow depth in the vicinity of the Drum Storage Area.

A GPR traverse in the area west of the building showed several clear stratigraphic interfaces in the subsurface, and signal returns suggestive of small boulders resting on the interfaces or within stratigraphic units (10-15 feet depth).

3.0 SOIL SAMPLING

Because of the contamination found on site during the Phase 1 investigation, it was recommended that offsite soils on adjacent property be sampled and that additional onsite samples be collected to better estimate the extent and depth of contamination. The locations of these samples are shown on Figure 3-1.

3.1 OFFSITE SURFICIAL SOILS

Soil samples were collected from adjacent property potentially downgradient to the west and east of the Jard facility. A soil sample was also collected from the storm drain exiting the site on the northwest boundary. All samples were collected using a hand trowel and shovel. After each sample was collected, the equipment was rinsed with methanol and then deionized water.

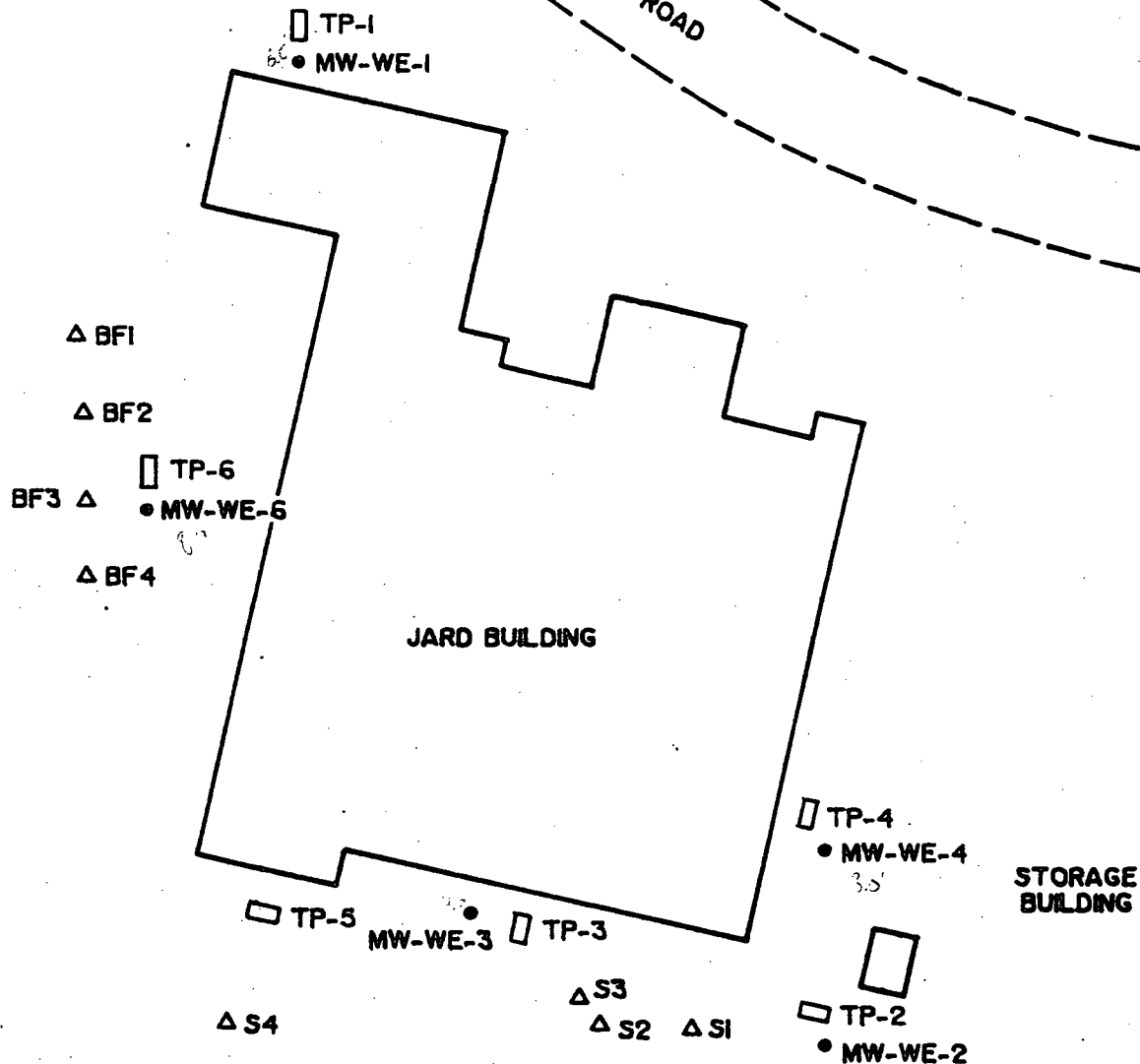
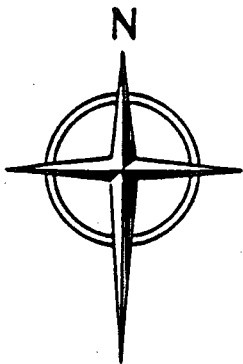
Four samples of the surface soil material from the edge of the Little League ball field west of the facility were collected. These locations are labeled as BF-1, BF-2, BF-3, and BF-4 on Figure 3-1. These samples were composited and a single soil sample was sent for laboratory analysis of PCB (EPA Schedule 608).

On the south side of the facility, between the facility and the creek, four soil samples (S1, S2, S3, and S4) were collected and composited. A single soil sample was sent for laboratory analysis for PCB.

On the northwest property boundary, sediment in a storm drain pipe in a ditch exiting the site was sampled.

3.2 ONSITE SOIL SAMPLING

Six test pits were excavated to estimate the extent and depth of contamination. Locations of the test pits were chosen to be near either known or suspected areas of contamination. In each test pit, soils were sampled and composited into shallow (0 to 3 feet) and deeper (3 feet to water table) samples. If the water table was relatively deep (greater than 6 feet), a third intermediate



LEGEND

- △ SOIL SAMPLING LOCATION
- TEST PIT LOCATION
- MONITORING WELL LOCATION



WehranEnviroTech

JARD COMPANY

**SOIL AND GROUNDWATER
SAMPLING LOCATIONS**

FIGURE 3-1

Scale: 1" = 80'

Date: 9/17/90

Project No: 0027201

sample was collected. Each soil sample was sent to the laboratory for analysis for volatile and semi-volatile organic compounds (EPA 601 and 602), phthalates (EPA 606), PCB's (EPA 608), and zinc. In test pits where the water table was encountered and a sample was obtainable (TP-1, TP-2, TP-3, and TP-5), unfiltered water samples were collected for the same suite of analyses. All water samples were high in sediment. Test pit logs are presented in Appendix A. All test pits encountered sand, gravel, and boulders. Field readings using an HNU photoionization detector were all near the baseline levels (less than one part per million).

Test Pit 1. On the northwest side of the facility, thin fill unit overlying rounded sand, gravel, and boulders. Water table was encountered at 7.5 feet. Three soil composites (TP-1A, TP-1B, and TP-1C) and a water sample (TP-1GW) were collected.

Test Pit 2. On the southeast side of the building near the drain storage area. Sand and gravel with some boulders. Water table at 2.5 feet. One soil composite (TP-2A) and a water sample (TP-2GW) were collected.

Test Pit 3. On the south side of the building. Some fill overlying sand and cobbles. Strong organic odor, described in the field as similar to a leachfield. Dark black, oily free product visible at about 3.5 feet deep, on top of the water table surface. One soil composite (TP-3A) and a water sample (TP-3GW) were collected.

Test Pit 4. On the east side of the building, just south of the concrete structure. Fill and sand. Stopped excavation at 2.5 feet because of the presence of a buried PVC pipe. Soil was moist. One soil sample (TP-4A) was collected. No water was encountered.

Test Pit 5. On the southwest side of the building, in the area near a concrete structure and associated standpipes. Sand, gravels, and boulders. Groundwater encountered at 6.5 feet. A sheen was noted on the water. Two soil samples (TP-5A and TP-5C) and a water sample (TP-5GW) were collected.

Test Pit 6. On the west side of the building. Fill, sand and gravel, with boulders. Groundwater at eight feet. Two soil samples (TP-6A and TP-6C) were

collected. No water sample was collected because the pit was unstable and collapsed.

4.0 GROUNDWATER SAMPLING

In order to obtain groundwater samples for chemical analysis and to obtain groundwater levels for estimating the direction of groundwater flow, five monitoring wells were installed. The wells were installed by Clean Harbors, Inc. using hollow stem auger techniques. Because of the frequency of boulders expected during drilling, no attempt was made to obtain soil samples during the drilling. Rather, each of the five wells was located adjacent to one of the test pits, and lithologic data obtained from test pit logs was assumed applicable to the well description. In all cases, the surficial soils are comprised of sand, gravel, and occasional cobbles and boulders. All wells were installed using 2-inch PVC pipe, with a number 10-slot 5-foot screen.

After the wells were drilled and installed, each standpipe was developed by bailing until the bailed water was clear or relatively free of turbidity. Water from wells MW-1A, MW-2A, and MW-6 contained some fine materials even after development was complete. Liquid from well MW-3A consisted of both an aqueous and non-aqueous phase. Water samples were collected during the following week for the same analyses as completed on test pit samples (EPA Schedules 601, 602, 606, and 608, and zinc).

Well MW-WE-1. Adjacent to test pit 1 on the northwest part of the site, the well has a total depth of 11.4 feet. Water level during drilling was about 7.5 feet below land surface.

Well MW-WE-2. Adjacent to test pit 2 near the outdoor storage building. The well has a total depth of 7.0 feet. Water level during drilling was estimated to be 2.5 feet below land surface.

Well MW-WE-3. Adjacent to test pit 3 on the south side of the building. The well has a total depth of 8.5 feet. Water level during drilling was estimated to be 3.5 feet below land surface.

Well MW-WE-4. Adjacent to test pit 4 on the east of the building. The well has a total depth of 7.5 feet. Water level during drilling was about 3 feet below land surface.

Well MW-WE-6. Adjacent to test pit 6 on the west of the building. The well has a total depth of 11.8 feet. Water level during drilling was about 8 feet below land surface.

No well was installed near Test Pit 5, because of the proximity of MW-WE-3 and the existence of prior data collected from the concrete structure near Test Pit 5.

4.1 WATER LEVEL MEASUREMENTS

Static water levels were measured in each well on June 13, 1990. Water levels were:

<u>WELL</u>	<u>WATER LEVEL (feet below land surface)</u>
MW-WE-1	6.5
MW-WE-2	2.9
MW-WE-3	4.6
MW-WE-4	3.0
MW-WE-6	8.0

Because the wells were not field surveyed, the exact elevations of each well was not available. The site, however, is generally paved and level. If land surface is assumed to be virtually level, groundwater flow is southeasterly across the site, generally from the direction of MW-WE-1 toward MW-WE-2.

5.0 RESULTS AND CONCLUSIONS

Analytical data from soil and water samples are presented in Appendices C, D, and E, and summarized in Tables 5-1, 5-2, 5-3, and 5-4. Appendix C includes soil chemical data from the test pits. Appendix D includes water quality data from the test pits. Appendix E includes water quality data from wells. All the data are summarized as follows:

Table 5-1. Soil Test Pit Data.

Table 5-2. Water Quality in Test Pits.

Table 5-3. Water Quality in Wells.

Table 5-4. Oil Phase Chemistry in Well MW-3A.

Offsite soil samples analyzed for PCB's were below applicable quantitation limits. Specifically, soils on the south side of the property (S1 - S4) were below the quantitation limit of 20 mg/kg. Soils on the west side near the ball field (BF-1-BF-4) and from the street drain on the northwest part of the site were below the quantitation limit of 0.2 mg/kg.

Water samples from the wells were comparable with test pit results. Most measured contaminants were in MW-3 and TP-3. Of the few volatile and semi-volatile compounds which were detected in MW-3, MW-4, and MW-6, all were below applicable State Enforcement Standards except for concentrations of trichloroethene of 6 micrograms per liter ($\mu\text{g/l}$) in MW-6 and 7 $\mu\text{g/l}$ in MW-3 (Standard of 5 $\mu\text{g/l}$), and of vinyl chloride of 3 $\mu\text{g/l}$ in MW-3 (Standard of 2 $\mu\text{g/l}$). Phthalates were measured in all samples, ranging between 0.026 milligrams per liter (mg/l) in the field blank and 2.8 mg/l in MW-6. Phthalates in water from MW-3 were 110,000 mg/l. PCB concentrations were below the quantitation limit of 0.001 mg/l in the field blank, but measurable in all other samples ranging between 0.022 mg/l in MW-1 and 0.16 mg/l in MW-6. PCB's in water from MW-3 were

TABLE 5-1										
TEST PIT SOILS - CHEMICAL DATA SUMMARY										
COMPOUND	TP-1A	TP-1B	TP-1C	TP-2A	TP-3A	TP-4A	TP-5A	TP-5C	TP-6A	TP-6C
Total Xylenes	-	-	-	-	3	-	-	-	-	-
Diethylphthalate	-	-	-	1.1	-	0.75	-	-	-	-
Di-n-butyl phthalate	0.38	-	-	-	-	1.0	0.93	-	-	0.66
bis(2-ethylhexyl)phthalate	-	-	-	33	3000	130	4.1	-	4.1	-
Di-n-octylphthalate	-	-	-	-	-	-	1.1	-	-	-
Aroclor 1242	7.5	2.1	1.1	0.6	77	37	10	0.3	13	35
Zinc	26	19	20	94	2600	940	43	82	56	120

- Indicates analysis was below quantitation limit.

Concentrations in milligrams per kilogram (mg/kg).

All other compounds in EPA Schedules 601, 602, 606, and 608 were below applicable quantitation limits.

TABLE 5-2

TEST PIT WATER SAMPLES - CHEMICAL DATA SUMMARY

COMPOUND	TP-1GW	TP-2GW	TP-3GW	TP-5GW
1,1-Dichloroethane	-	-	22	-
trans-1,2-Dichloroethene	-	-	7	-
1,1,1-Trichloroethane	-	19	8	-
Trichloroethene	-	23	-	-
Chlorobenzene	-	-	8	-
1,4-Dichlorobenzene	-	-	23/36 ⁽¹⁾	-
Ethylbenzene	-	-	10	-
Toluene	-	-	48	-
Total Xylenes	-	-	79	-
Diethylphthalate (mg/l)	-	-	23	-
bis(2-ethylhexyl)phthalate (mg/l)	0.13	0.23	5500	0.15
Aroclor 1242 (mg/l)	0.03	0.06	3.0	-
Zinc (mg/l)	0.9	4.9	32	3.0

- Indicates analysis was below quantitation limit.

All concentrations in micrograms per liter ($\mu\text{g}/\ell$), except as noted.

All other compounds in EPA Schedules 601, 602, 606, and 608 were below applicable quantitation limits.

(1) 23 $\mu\text{g}/\ell$ was in EPA 601 analysis; 36 $\mu\text{g}/\ell$ was in EPA 602 analysis.

TABLE 5-3
GROUNDWATER CHEMICAL DATA SUMMARY

COMPOUND	MW-1A	MW-2A	MW-3A	MW-3B	MW-4A	MW-6A	MW-9A ⁽⁴⁾
Vinyl Chloride	-	-	3	3	-	-	-
1,1-Dichloroethane	-	-	24	24	-	11	-
trans-1,2-dichloroethene	-	-	14	15	-	-	-
1,1,1-Trichloroethane	-	-	6	7	4	6	-
Trichloroethene	-	-	-	-	-	6	-
1,3-Dichlorobenzene	-	-	-	2	-	-	-
1,3-Dichlorobenzene	-	-	4	2/7 ⁽²⁾	-	-	-
1,4-Dichlorobenzene	-	-	12/17 ⁽¹⁾	16/24 ⁽³⁾	-	7	-
Ethylbenzene	-	-	-	2	-	-	-
Toluene	-	-	11	13	-	-	-
Total Xylenes	-	-	3	17	-	-	-
bis(2-ethylhexyl)phthalate (mg/L)	0.033	0.052	110,000	98,000	0.038	2.8	0.026
Aroclor 1242 (mg/L)	0.022	0.093	390	280	0.023	0.16	-
Zinc (mg/L)	0.2	0.03	3.2	5.9	0.07	0.06	-

- Indicates analysis was below quantitation limit.

All concentrations in micrograms per liter (µg/L), except as noted.

All other compounds in EPA Schedules 601, 602, 606, and 608 were below applicable quantitation limits.

MW-3B is a duplicate analysis of MW-3A.

(1) 12 µg/L was in EPA 601 analysis; 17 µg/L was in EPA 602 analysis.

(2) 2 µg/L was in EPA 601 analysis; 7 µg/L was in EPA 602 analysis.

(3) 16 µg/L was in EPA 601 analysis; 24 µg/L was in EPA 602 analysis.

(4) MW-9A is a field blank.

TABLE 5-4
GROUNDWATER (OIL PHASE)
CHEMICAL DATA SUMMARY

COMPOUND	MW-3A	MW-3B
1,1-Dichloroethane	2200	2100
trans-1,2-Dichloroethene	1400	1500
1,1,1-Trichloroethane	2500	2400
Chlorobenzene	550	570
1,3-Dichlorobenzene	1500	1500/10000 ⁽²⁾
1,4-Dichlorobenzene	14000	14000
Chlorobenzene	550	720
1,4-Dichlorobenzene	14000	14000/30000 ⁽³⁾
Ethylbenzene	.(1)	1800
Toluene	.(1)	8400
Total Xylenes	.(1)	16000
Aroclor 1242 (mg/kg)	2500	3100

- Indicates analysis was below quantitation limit.

All concentration in micrograms per liter ($\mu\text{g}/\ell$), except as noted.

All other compounds in EPA Schedules 601, 602, 606, and 608 were below applicable quantitation limits.

(1) Quantitation limit of $0.5 \mu\text{g}/\ell$.

(2) $1500 \mu\text{g}/\ell$ was in EPA 601 analysis; $10000 \mu\text{g}/\ell$ was in EPA 602 analysis.

(3) $14000 \mu\text{g}/\ell$ was in EPA 601 analysis; $30000 \mu\text{g}/\ell$ was in EPA 602 analysis.

390 mg/l. Zinc concentrations were low in all samples. The duplicate analysis on MW-3 confirmed the measured concentrations of all detected compounds.

Most samples from the test pits were generally free of contamination. The obvious exception was soil from Test Pit 3. The only volatile or semi-volatile compound detected in the soils was total xylenes of 3 $\mu\text{g/l}$ in TP-3A, just above applicable quantitation levels and well below State Enforcement Standards (see Table 5-1). Test pit water samples from TP-2 and TP-3 had low concentrations of several chlorinated solvents and BTEX compounds (see Table 5-2). Only 23 $\mu\text{g/l}$ chloroethene in TP-2GW was above its State Enforcement Standards of 5 $\mu\text{g/l}$. Phthalates were detected at relatively low concentrations in shallow samples from Test Pits 1, 2, 4, 5, and 6. Much larger concentrations were detected in Test Pit 3. PCB concentrations ranged between 0.3 and 77 mg/l, with samples from Test Pits 3, 4, and 6 greater than 10 mg/l. Zinc concentrations were generally low, with a maximum concentrations in Test Pit 3 of 2600 mg/l. Water samples from the test pits are probably not representative of dissolved concentrations because they were unfiltered samples, with large amounts of sediment.

In sampling the liquid in well MW-3, it was observed that two phases were present. The laboratory separated the phases in analyses for volatiles and semi-volatiles (EPA 601 and 602), and PCB's (EPA 608). The entire sample was analyzed for phthalates (EPA 601) and zinc. Table 5-4 presents results of analysis of the oil phase for EPA 601, 602, and 608 compounds.

In order to discuss the results of the Phase 2 sampling, it is necessary to compare these results with the Phase 2 results presented in an earlier report. The following conclusions are believed reasonable:

- Surficial soils (the upper 12 inches) at the site are locally contaminated with variable levels of PCB's and phthalates. The most significant contamination seems to occur near one of the two dry wells near the southwest and eastern walls of the building, the drum

storage area, or the assumed leachfield on the southeast side of the building.

- Deeper soils (down to eight feet in depth), except in the vicinity of Test Pit 3 and, possible, Test Pit 6, generally seem free of contamination.
- Significant levels of volatile and semi-volatile compounds seem limited to surficial contamination near the drum storage area and, possibly, near Test Pit 6.
- Groundwater is contaminated near TP-3 with high levels of process chemicals. Groundwater from MW-6 had elevated levels of trichloroethene. Low concentrations of PCB's and phthalates were present in all water samples collected onsite. These low concentrations may not be in the dissolved phase because the water samples contained high sediment loads.

In order to discuss the significance of the chemical results, it is helpful to review applicable State and Federal Standards as they apply to chemicals found on site. The primary concerns are potential health effects from either PCB's or phthalates. Of lesser concern, because of more limited occurrence, are health effects from chlorinated solvents.

The clean-up goals for PCB's in soils have been variable, but generally have been between 1 and 50 mg/l. The lower concentrations have generally been recommended in residential areas. Industrial areas have had cleanup levels recommended between 10 and 50 mg/l, depending on potential environmental or human exposure pathways. Recent reevaluation of the individual cancer risk assessment data for PCB's suggests that various containment or exposure reduction scenarios short of removal may be sufficient (INSIDE EPA Weekly Report, Vol. 11, No. 35, August 31, 1990, p.16). In reference to an early draft of a planned EPA guidance document, it has been suggested that PCB's are a principal threat at 100 mg/kg in residential areas and at 500 mg/kg in industrial areas.

PCB's in water have a Proposed Federal Maximum Contaminant Level (MCL) of 0.0005 mg/l. Although all water samples collected on site were above this level, Wehran does not believe that there is necessarily a major groundwater contamination problem. Because the water samples were not filtered, it is likely that the measured PCB's were particulate rather than dissolved.

Whatever level of cleanup is ultimately recommended for PCB's in site soils, it is likely that shallow and deeper soils near TP-3, and at least shallow soils near TP-4 and TP-5 will need to be remediated. Except for soils near TP-3 (where free product exists in the subsurface), remediation could consist conceivably of containment or exposure reduction measures.

Phthalates are the subject of ongoing toxicologic research. The EPA has concluded (Federal Register, Vol. 53, No. 14, January 22, 1980, p.1895) that butylbenzyl phthalate (BBP) and bis(2-ethylhexyl)phthalate (DEHP) are the phthalates of health concern. EPA, as of July 5, 1990, has proposed a Primary Drinking Water MCL for DEHP of 0.004 mg/l. There are no known recommended soil standards for DEHP.

DEHP, which is classified as a probable human carcinogen (Group B2), is the primary phthalate found in samples on site. As with the PCB data, all water samples collected (even including the field blank) exceeded the proposed MCL for DEHP. Because the water samples were not filtered, it is likely that the measured DEHP concentrations were based on a particulate rather than a dissolved source. Even if the blank concentration were subtracted as a baseline from the other samples, all would still exceed the Proposed MCL.

Whatever level of cleanup is ultimately recommended for phthalates in site soils, the distribution of phthalates is very similar to the distribution of PCB's onsite. Any soil remediation will automatically address both compounds.

Chlorinated solvents were below Vermont Enforcement Standards in all water samples, except for trichloroethene in soils near the Drum Storage Area. Chlorinated solvents are abundant, particularly in the oil phase, in liquid samples from MW-3. The only other water samples that indicate a potential contamination

problem are in samples from TP-3 and, possibly, MW-6. Because these samples were not filtered, the analysis does not reflect the aqueous phase. Whatever the remediation and cleanup levels proposed, solvents are significant near TP-3 and TP-2, and possibly a factor near TP-6.

In summary, the Phase 2 investigation continued the assessment of the extent and depth of contamination onsite at the Jard Facility and on adjacent property. No evidence of contamination was found in adjacent soils. Contamination onsite appears restricted to "hot spots" of concentrated chemicals in association with former process stream disposal areas south and east of the facility. Groundwater is contaminated locally in the vicinity of TP-3, where free product was observed during excavation and drilling.

Bring
in
only
to
be
f

6.0 RECOMMENDATIONS

The cost of any remediation will be dependent on the volumes of soils needing treatment. This volume, in turn, is dependent on the cleanup level recommended for the site. The cleanup level is dependent on containment or exposure reduction scenarios acceptable as part of site remediation. It is assumed that soil remediation, but not necessarily groundwater treatment, will be necessary for the site, based on the low mobilities of chemicals found in the subsurface, the general lack of confirmed groundwater contamination, and the lack of nearby receptors. As part of the evaluation of the most appropriate remediation plan for the site, are recommended:

- Determine applicable State guidance levels for required cleanup of site soils. This determination will include consideration of any containment or exposure reduction scenarios (paving, for example) considered applicable for future site plans, along with limited exposure pathways for environmental or human health risks.
- Excavate soils in hot spots. The estimated volumes of soils needed to be removed will be confirmed by analysis of soils collected during the excavation process.
- Concurrent with soil excavation, sample water from onsite wells for EPA Schedules 601, 602, 606, and 608. Filter water for analysis for EPA 606 and 608 compounds.

APPENDIX A
TEST PIT LOGS



WEHRAN ENGINEERING
CONSULTING ENGINEERS

PROJECT No. 00272.01

TEST PIT LOGS

PROJECT: JARD

SHEET 1 OF 1

CLIENT:

CONTRACTOR: CLEAN HARBORS

EQUIPMENT: BACKHOE

DEPTH TO WATER:

INSPECTOR: CINDY SPRAGUE/ANDREA ASCH

LOG OF TEST PIT No. TP-1

Date: 5/9/90

Elevation

WELL CONSTRUCTION	DEPTH FT.	SAMPLE No. DEPTH	CLASSIFICATION	REMARKS
Monitor well not installed in Test Pit	5		GRAY GRAVEL AND SAND, DRY, FILL	0-3' GRAB SOIL SAMPLE COLLECTED AND ANALYZED IN ACCORDANCE WITH EPA METHOD 8010, 8020, 606 AND PCB'S.
			BROWN SAND, SOME GRAVEL, SOME COBBLES, SOME BOULDERS, LITTLE SILT, MOIST. GRAVEL, COBBLES AND BOULDERS ARE ROUNDED.	
	10		SOILS SATURATED AT 7.5'	3-6' GRAB SOIL SAMPLE COLLECTED AND ANALYZED IN ACCORDANCE WITH EPA METHOD 8010, 8020, 606 AND PCB'S.
	15		END OF EXCAVATION - 8'	7.5' GRAB SOIL SAMPLE COLLECTED. ANALYSIS SIMILAR TO ABOVE. GROUNDWATER SAMPLE COLLECTED: EPA 601, 602, 606 AND PCB.
	20			

COMMENTS: Location: North of building - near NW corner



PROJECT No. 00272.01

TEST PIT LOGS

PROJECT: JARD

SHEET 1 OF 1

CLIENT:

CONTRACTOR : CLEAN HARBORS

EQUIPMENT: BACKHOE

DEPTH TO WATER:

INSPECTOR: CINDY SPRAGUE/ANDREA ASCH

LOG OF TEST PIT No. TP-2

Date: 5/9/90

Elevation

Monitor well not installed in Test Pit

COMMENTS: Location: South east of main building - near drum storage area

PROJECT: JARD

SHEET 1 OF 1

CLIENT:

CONTRACTOR : CLEAN HARBORS

EQUIPMENT: BACKHOE

DEPTH TO WATER:

INSPECTOR: CINDY SPRAGUE/ANDREA ASCH

LOG OF TEST PIT No. TP-3

Date: 5/9/90

Elevation

[illegible]

COMMENTS: Location: south of building, in area of old leachfield



PROJECT No. 00272.01

TEST PIT LOGS

PROJECT: JARD

SHEET 1 OF 1

CLIENT:

CONTRACTOR : CLEAN HARBORS

EQUIPMENT: BACKHOE

DEPTH TO WATER:

INSPECTOR: CINDY SPRAGUE/ANDREA ASCH

LOG OF TEST PIT No.

TP-4

Date: 5/9/90

Elevation

[illegible][illegible][illegible][illegible][illegible]

Monitor well not installed in Test Pit

0-1' GRAY-BROWN SAND AND GRAVEL, DAMP (FILL) 1-
2.5' GRAY-BROWN SAND (FILL MATERIAL AROUND
PIPE). MOIST

0-2.5' GRAB SOIL SAMPLE
COLLECTED ANALYSIS: EPA 8010,
8020, 606, PCB
ENCOUNTERED PINK PVC PIPE AT
APPROXIMATELY 1.5' - POSSIBLY
GAS PIPE

BOTTOM OF EXCAVATION ~ 2.5' DUE TO GAS PIPE

5

-10

15

20

COMMENTS: Location: East side of building, south of concrete tile



WEHRAN ENGINEERING
CONSULTING ENGINEERS

PROJECT No. 00272.01

TEST PIT LOGS

PROJECT: JARD

SHEET 1 OF 1

CLIENT:

CONTRACTOR: CLEAN HARBORS

EQUIPMENT: BACKHOE

DEPTH TO WATER:

INSPECTOR: CINDY SPRAGUE/ANDREA ASCH

LOG OF TEST PIT No. TP-5

Date: 5/9/90

Elevation

WELL CONSTRUCTION	DEPTH FT.	SAMPLE No. DEPTH	CLASSIFICATION	REMARKS
Monitor well not installed in Test Pit			BROWN SAND, SOME GRAVEL, SOME BOULDERS, SOME COBBLES, LITTLE SILT, DAMP TO MOIST	0-3' COLLECT GRAB SOIL SAMPLE ANALYSIS: EPA 8010, 8020, 606 AND PCB
	5		GROUNDWATER *AT 6.5'	3'-6' COLLECT GRAB SOIL SAMPLE ANALYSIS: EPA 8010, 8020, 606, PCB
			BOTTOM OF EXCAVATION ~ 7.5'	6-6.5' COLLECT GRAB SOIL SAMPLE SAME ANALYSIS AS ABOVE
				6.5' COLLECT GW SAMPLE ANALYSIS: EPA 601, 602, 606, PCB
				*SHEEN ON TOP OF WATER
	10			
	15			
	20			

COMMENTS: Location: south of building, near southwest corner



WEHRAN ENGINEERING
CONSULTING ENGINEERS

PROJECT No. 00272.01

TEST PIT LOGS

PROJECT: JARD

SHEET 1 OF 1

CLIENT:

CONTRACTOR: CLEAN HARBORS

EQUIPMENT: BACKHOE

DEPTH TO WATER:

INSPECTOR: CINDY SPRAGUE/ANDREA ASCH

LOG OF TEST PIT No. TP-6

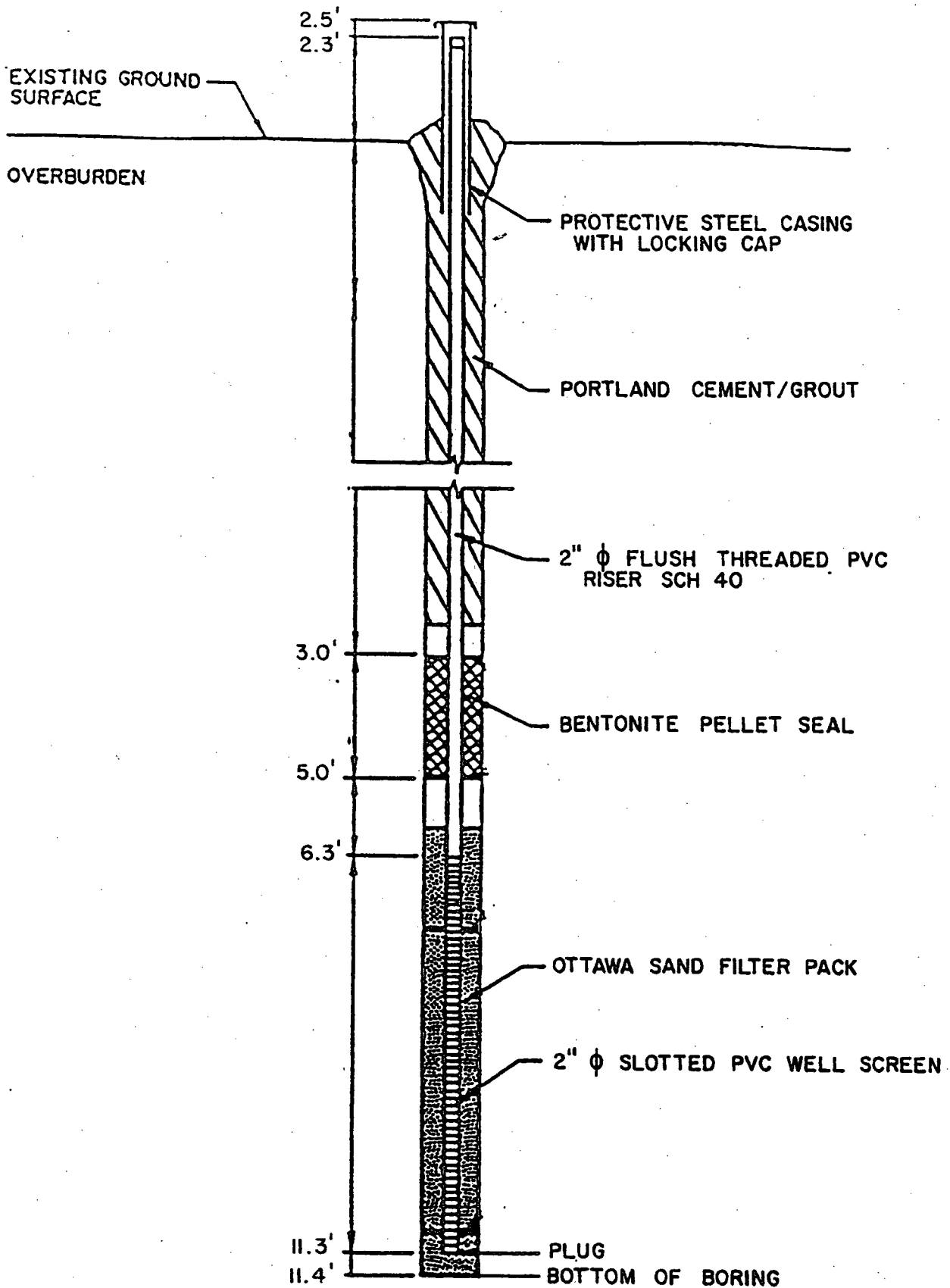
Date: 5/9/90

Elevation

WELL CONSTRUCTION	DEPTH FT.	SAMPLE No. DEPTH	CLASSIFICATION	REMARKS
Monitor well not installed in Test Pit			GRAY SAND AND GRAVEL, DRY - FILL FOR PARKING LOT	0-3' COLLECT GRAB SOIL SAMPLE - ANALYZED IN ACCORDANCE WITH EPA METHODS 8010, 8020, 606, PCB.
			BROWN SAND, SOME GRAVEL, SOME BOULDERS, SOME COBBLES, LITTLE SILT.	3-6' COLLECT GRAB SOIL SAMPLE - ANALYSIS SAME AS ABOVE.
	5		GROUNDWATER AT 8' *	6'-8' COLLECT GRAB SOIL SAMPLE - ANALYSIS SAME AS ABOVE.
	10		BOTTOM OF EXCAVATION ~ 8'	* COULD NOT GET SAMPLE OF GROUNDWATER BECAUSE TEST PIT WAS UNSTABLE AND MATERIAL COLLAPSED INTO THE BOTTOM OF THE PIT.
	15			
	20			

COMMENTS: Location: west side of building, between powerlines and building.

APPENDIX B
MONITORING WELL CONSTRUCTION DIAGRAMS



WehranEnviroTech

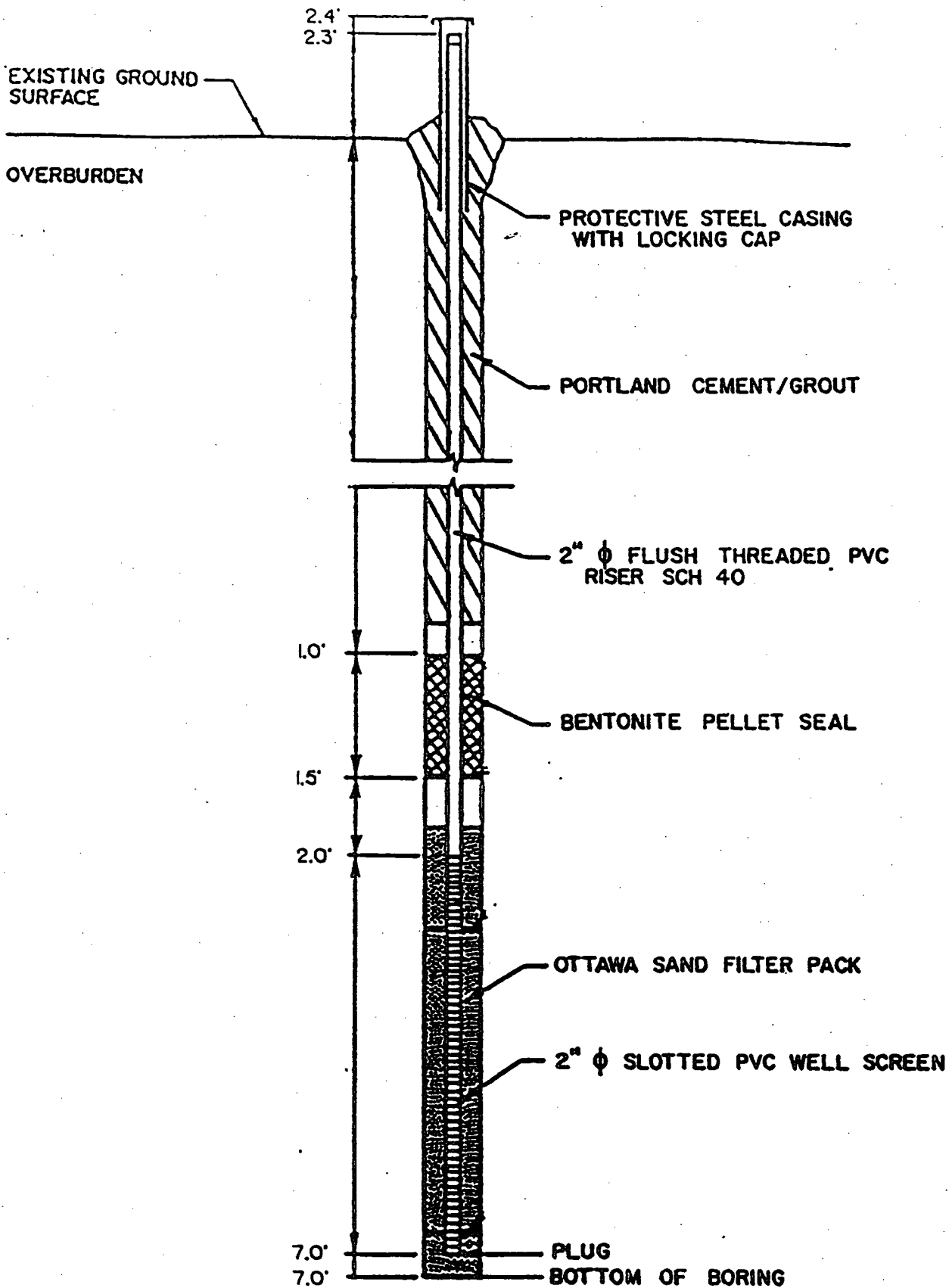
JARD COMPANY

MONITORING WELL MW-WE-1

Scale: NTS

Date: 9/17/90

Project No: 0027201



WehranEnviroTech

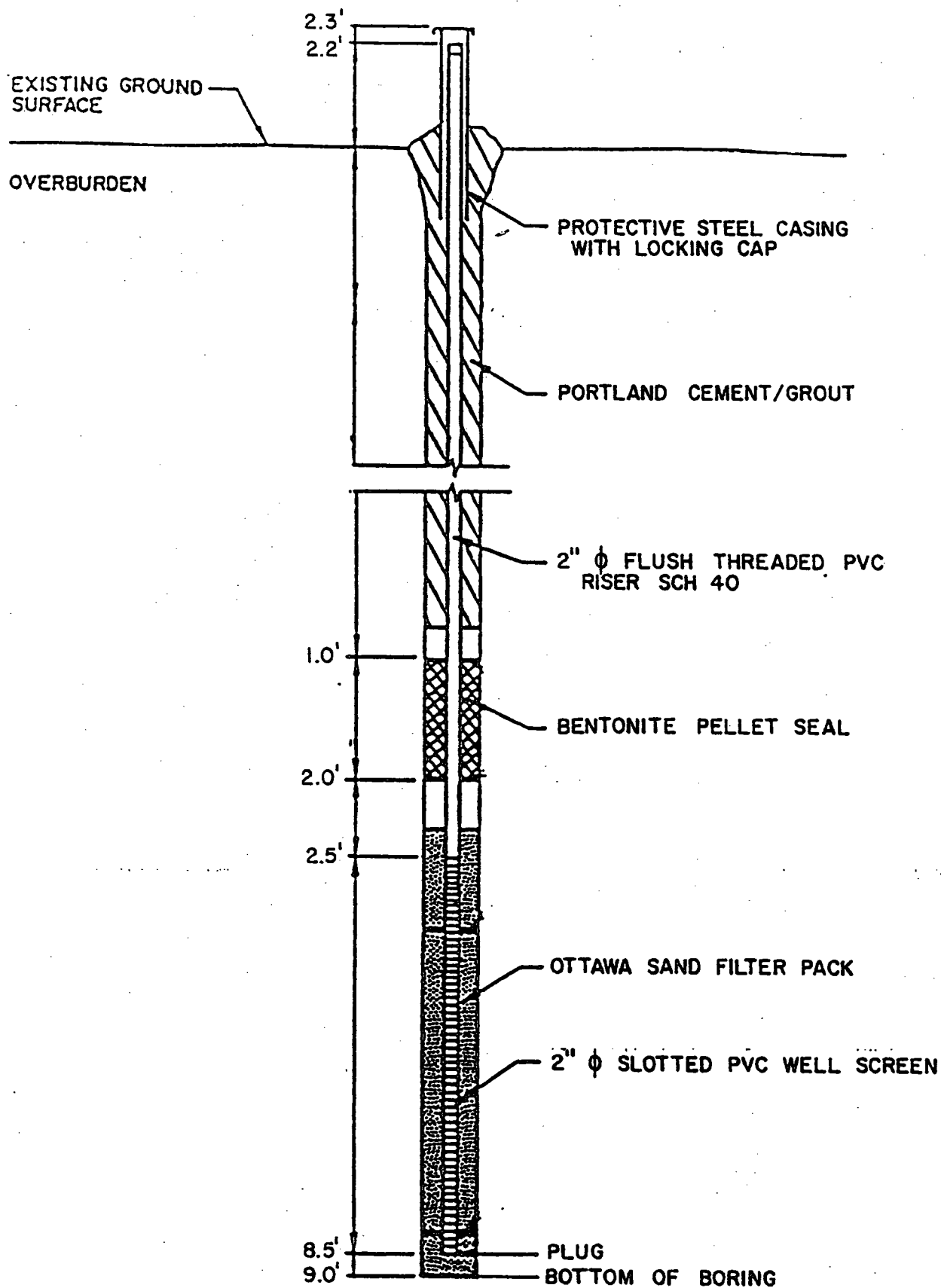
JARD COMPANY

MONITORING WELL MW-WE-2

Scale: NTS

Date: 1/15/91

Project No: 0027201



WehranEnviroTech

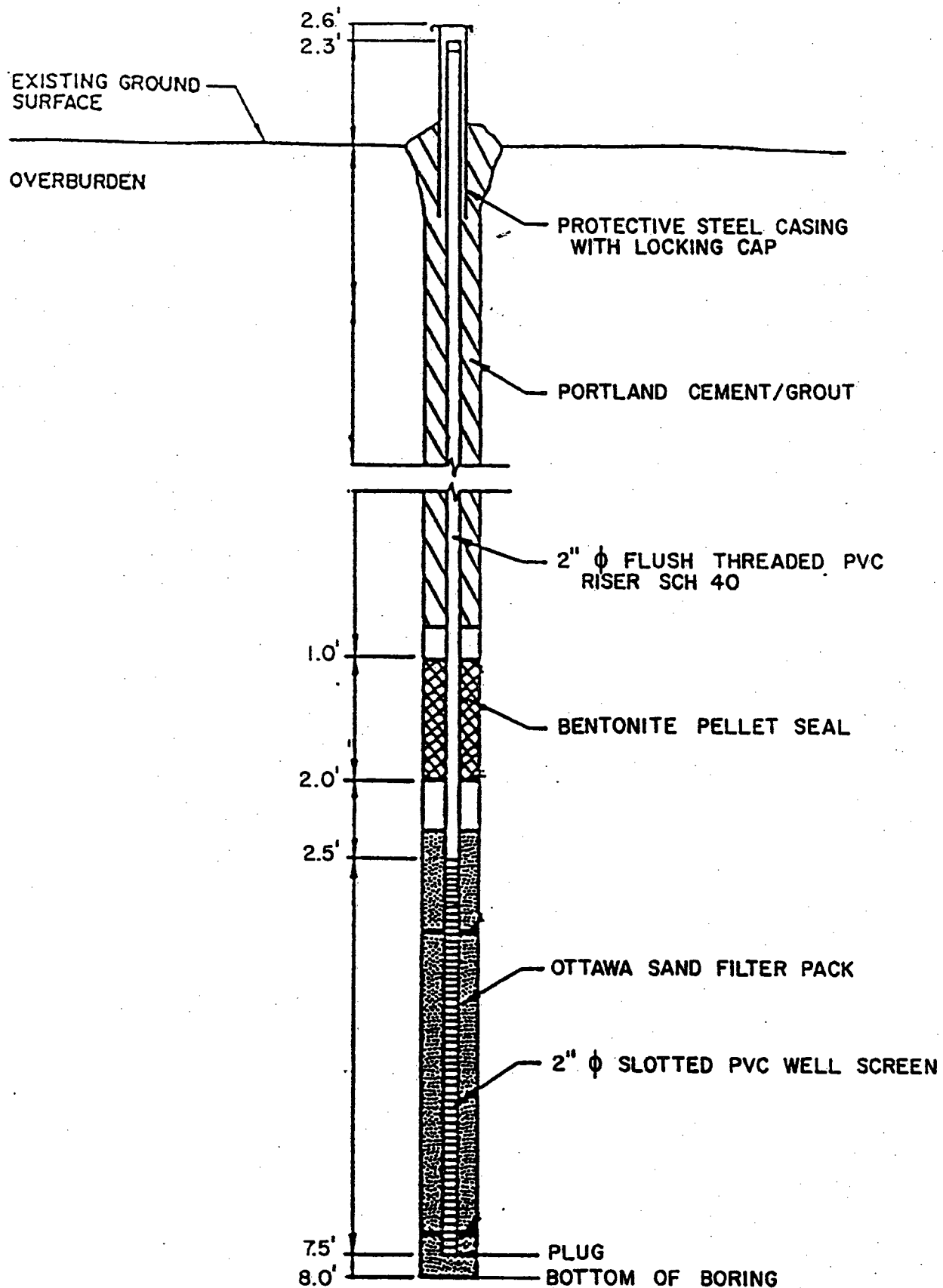
JARD COMPANY

MONITORING WELL MW-WE-3

Scale: NTS

Date: 9/17/90

Project No: 0027201



WehranEnviroTech

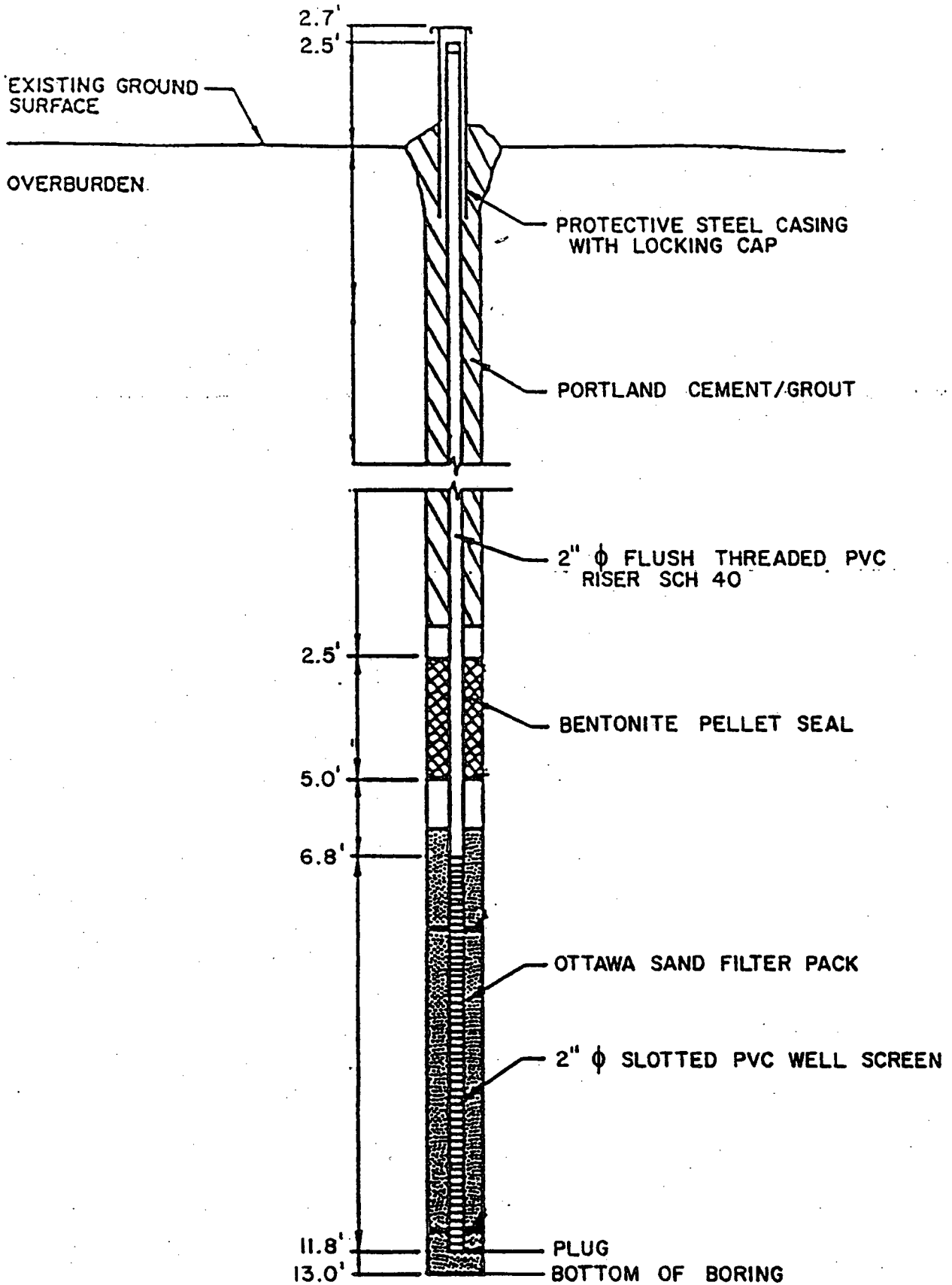
JARD COMPANY

MONITORING WELL MW-WE-4

Scale: NTS

Date: 9/17/90

Project No: 0027201



WehranEnviroTech

JARD COMPANY

MONITORING WELL MW-WE-6

Scale: NTS

Date: 9/17/90

Project No: 0027201

APPENDIX C
TEST PIT SOIL CHEMICAL DATA



INDUSTRIAL & ENVIRONMENTAL
ANALYSTS, INC.
1901 NORTH HARRISON AVE.
CARY, N.C. 27513

CHAIN OF CUSTODY RECORD

No: 4447

PROJECT #		PROJECT NAME		# OF CONTAINERS		MATRIX		REQUESTED PARAMETERS										
20272.01		SARD						SOIL	WATER	2010/2020	PCB/606	PCB only	Zinc (Tmg)	209/602	PCB	606	Zinc (Total)	
SAMPLE I.D.	DATE	TIME	STATION LOCATION															
TP1A	5-9-90	10:30	Test pit 1 0-3'	2	X		X	X		X								
TP1B	5-9-90	10:30	Test pit 1 3-6'	2	X		X	X		X								
TP1C	5-9-90	10:30	Test pit 1 7.5'	2	X		X	X		X								
TP2A	5-9-90	12:00	Test pit 2 0-2.5'	2	X		X	X		X								
TP26w	5-9-90	12:00	Test pit 2 groundwater	6		X					X	X	X	X				
TP16w	5-9-90	10:30	Test pit 1 groundwater	6		X					X	X	X	X				
TP3A	5-9-90	12:30	Test pit 3 0-2.5'	2	X		X	X		X								
TP36w	5-9-90	12:30	Test pit 3 groundwater	6		X					X	X	X	X				
TP4A	5-9-90	11:30	Test pit 4 0-2.5'	2	X		X	X		X								
TP5A	5-9-90	2:00	Test pit 5 0-3'	2	X		X	X		X								
TP5C	5-9-90	2:00	Test pit 5 6-6.5'	2	X		X	X		X								
TP56w	5-9-90	2:00	Test pit 5 groundwater	6		X					X	X	X	X				
RELINQUISHED BY (SIGNATURE)		DATE	TIME	RECEIVED BY		DATE	TIME	IEA QUOTE NO.		IEA RUSH NO.								
Cynthia Ingram		5-10-90	3:20	Tracy Hutchins		5/10	3:20											
RELINQUISHED BY (SIGNATURE)		DATE	TIME	RECEIVED FOR LAB BY		DATE	TIME	PROJECT MANAGER (PLEASE PRINT)		P.O. NO.								
										39950								
IEA REMARKS								FIELD REMARKS										

5.15



Date: May 24, 1990

Cindy Sprague
Wehran Engineering
1 Mill Street, Chace Mill
Burlington, VT 05401-1532

Reference: IEA Report No. 237130
PO #

Dear Cindy:

Transmitted herewith are the results of analyses on 17 samples submitted to our laboratory on 5/10/90.

Please see the enclosed reports for your results.

Very truly yours,

INDUSTRIAL & ENVIRONMENTAL ANALYSTS, INC.

A handwritten signature in cursive script, appearing to read "Paul", is written over the typed name.

Paul S. Warden
Staff Scientist

Offices and laboratories located in: Essex Junction, Vermont
Research Triangle Park, North Carolina



LAB RESULTS

5/25/90


Wehran Engineering
1 Mill Street, Chace Mill
Burlington, VT 05401-1532

IEA # 237130 JARD

Date Received: 5/10/90

Date Collected: 5/9/90

Total Samples Received: 17 Total Parameters Requested: 69

Reviewed & Approved by 

Attention: Cindy Sprague

Sa#	Sample I.D.	Parameter Studied	Results	Comments
1	TP-1A	CX606	-	See attached sheets.
2	TP-1B	CX606	-	See attached sheets.
3	TP-1C	CX606	-	See attached sheets.
4	TP1-GW	CW606	-	See attached sheets.
5	TP-2GW	CW606	-	See attached sheets.
6	TP-3GW	CW606	-	See attached sheets.
9	TP-5GW	CW606	-	See attached sheets.
10	TP-2A	CX606	-	See attached sheets.
11	TP-3A	CX606	-	See attached sheets.
12	TP-4A	CX606	-	See attached sheets.
13	TP-5A	CX606	-	See attached sheets.
14	TP-6A	CX606	-	See attached sheets.
15	TP-5C	CX606	-	See attached sheets.
16	TP-6C	CX606	-	See attached sheets.
4	TP1-GW	GC Methods601/602	-	See attached sheets.
5	TP-2GW	GC Methods601/602	-	See attached sheets.
6	TP-3GW	GC Methods601/602	-	See attached sheets.
9	TP-5GW	GC Methods601/602	-	See attached sheets.
1	TP-1A	PCB in soil	-	See attached sheets.
2	TP-1B	PCB in soil	-	See attached sheets.
3	TP-1C	PCB in soil	-	See attached sheets.
7	BF1-4	PCB in soil	-	See attached sheets.
8	1-4 South composite	PCB in soil	-	See attached sheets.
10	TP-2A	PCB in soil	-	See attached sheets.
11	TP-3A	PCB in soil	-	See attached sheets.

Comments:



LAB RESULTS

5/25/90

Wehran Engineering
1 Mill Street, Chace Mill
Burlington, YT 05401-1532

IEA # 237130 JARD

Date Received: 5/10/90

Date Collected: 5/9/90

Total Samples Received: 17

Total Parameters Requested: 69

Reviewed & Approved by 

Attention: Cindy Sprague

Sa#	Sample I.D.	Parameter Studied	Results	Comments
12	TP-4A	PCB in soil	-	See attached sheets.
13	TP-5A	PCB in soil	-	See attached sheets.
14	TP-6A	PCB in soil	-	See attached sheets.
15	TP-5C	PCB in soil	-	See attached sheets.
16	TP-6C	PCB in soil	-	See attached sheets.
17	Street Drain	PCB in soil	-	See attached sheets.
4	TP1-GW	PCB in water	-	See attached sheets.
5	TP-2GW	PCB in water	-	See attached sheets.
6	TP-3GW	PCB in water	-	See attached sheets.
9	TP-5GW	PCB in water	-	See attached sheets.
1	TP-1A	SW-846 Method 8010 (special)	-	See attached sheets.
2	TP-1B	SW-846 Method 8010 (special)	-	See attached sheets.
3	TP-1C	SW-846 Method 8010 (special)	-	See attached sheets.
10	TP-2A	SW-846 Method 8010 (special)	-	See attached sheets.
11	TP-3A	SW-846 Method 8010 (special)	-	See attached sheets.
12	TP-4A	SW-846 Method 8010 (special)	-	See attached sheets.
13	TP-5A	SW-846 Method 8010 (special)	-	See attached sheets.
14	TP-6A	SW-846 Method 8010 (special)	-	See attached sheets.
15	TP-5C	SW-846 Method 8010 (special)	-	See attached sheets.
16	TP-6C	SW-846 Method 8010 (special)	-	See attached sheets.
1	TP-1A	SW-846 Method 8020 (special)	-	See attached sheets.
2	TP-1B	SW-846 Method 8020 (special)	-	See attached sheets.
3	TP-1C	SW-846 Method 8020 (special)	-	See attached sheets.
10	TP-2A	SW-846 Method 8020 (special)	-	See attached sheets.
11	TP-3A	SW-846 Method 8020 (special)	-	See attached sheets.

Comments:



LAB RESULTS

5/25/90

Wehran Engineering
1 Mill Street, Chace Mill
Burlington, VT 05401-1532

IEA # 237130 JARD

Date Received: 5/10/90

Date Collected: 5/9/90

Total Samples Received: 17

Total Parameters Requested: 69

Reviewed & Approved by 

Attention: Cindy Sprague

Sa#	Sample I.D.	Parameter Studied	Results	Comments
12	TP-4A	SW-846 Method 8020 (special)	-	See attached sheets.
13	TP-5A	SW-846 Method 8020 (special)	-	See attached sheets.
14	TP-6A	SW-846 Method 8020 (special)	-	See attached sheets.
15	TP-5C	SW-846 Method 8020 (special)	-	See attached sheets.
16	TP-6C	SW-846 Method 8020 (special)	-	See attached sheets.
1	TP-1A	Zinc, total	25.8 mg/Kg	wet weight
2	TP-1B	Zinc, total	18.9 mg/Kg	wet weight
3	TP-1C	Zinc, total	20.4 mg/Kg	wet weight
4	TP1-GW	Zinc, total	0.924 mg/L	
5	TP-2GW	Zinc, total	4.87 mg/L	
6	TP-3GW	Zinc, total	32.0 mg/L	
9	TP-5GW	Zinc, total	3.04 mg/L	
10	TP-2A	Zinc, total	93.7 mg/Kg	wet weight
11	TP-3A	Zinc, total	2560 mg/Kg ✓	wet weight
12	TP-4A	Zinc, total	942 mg/Kg	wet weight
13	TP-5A	Zinc, total	43.3 mg/Kg	wet weight
14	TP-6A	Zinc, total	55.6 mg/Kg	wet weight
15	TP-5C	Zinc, total	82.3 mg/Kg	wet weight
16	TP-6C	Zinc, total	120 mg/Kg	wet weight

Comments:



Purgeable Halocarbons
SW-846 Method 8010 Compounds

IEA Sample No.: 237130 1

Sample Identification: TP-1A

Date Collected: May 9, 1990

Date Analyzed: May 15, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Soil</u>	<u>Results</u>
		<u>Quantitation Limit</u> <u>µg/Kg</u>	<u>Concentration</u> <u>µg/Kg</u>
1	Chloromethane	1.0	BQL
2	Bromomethane	1.0	BQL
3	Vinyl Chloride	1.0	BQL
4	Chloroethane	1.0	BQL
5	Methylene chloride	1.0	BQL
6	Trichlorofluoromethane	1.0	BQL
7	1,1-Dichloroethene	1.0	BQL
8	1,1-Dichloroethane	1.0	BQL
9	trans-1,2-Dichloroethene	1.0	BQL
10	Chloroform	1.0	BQL
11	1,2-Dichloroethane	1.0	BQL
12	1,1,1-Trichloroethane	1.0	BQL
13	Carbon tetrachloride	1.0	BQL
14	Bromodichloromethane	1.0	BQL
15	1,2-Dichloropropane	1.0	BQL
16	trans-1,3-Dichloropropene	1.0	BQL
17	Trichloroethene	1.0	BQL
18	cis-1,3-Dichloropropene	1.0	BQL
19	1,1,2-Trichloroethane	1.0	BQL
20	Chlorodibromomethane	1.0	BQL
21	2-Chloroethylvinyl ether	1.0	BQL
22	Bromoform	1.0	BQL
23	Tetrachloroethene	1.0	BQL
24	1,1,2,2-Tetrachloroethane	1.0	BQL
25	Chlorobenzene	1.0	BQL
26	1,3-Dichlorobenzene	1.0	BQL
27	1,2-Dichlorobenzene	1.0	BQL
28	1,4-Dichlorobenzene	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



**Purgeable Aromatics
SW-846 Method 8020 Compounds**

IEA Sample No.: 237130 1

Sample Identification: TP-1A

Date Collected: May 9, 1990

Date Analyzed: May 15, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Soil</u>	<u>Results</u>
		<u>Quantitation Limit</u>	<u>Concentration</u>
		<u>µg/Kg</u>	<u>µg/Kg</u>
1	Benzene	1.0	BQL
2	Chlorobenzene	1.0	BQL
3	1,2-Dichlorobenzene	1.0	BQL
4	1,3-Dichlorobenzene	1.0	BQL
5	1,4-Dichlorobenzene	1.0	BQL
6	Ethylbenzene	1.0	BQL
7	Toluene	1.0	BQL
8	Total Xylenes	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



Phthalates
EPA Method 606 Compounds

IEA Sample Number: 237130 1

Sample Identification: TP-1A

Date Collected: May 9, 1990

Date Extracted: May 17, 1990

Date Analyzed: May 21, 1990

By: Rich

Number	Compound	Soil	Results
		Quantitation Limit µg/Kg	Concentration µg/Kg
1	Dimethylphthalate	350	BQL
2	Diethylphthalate	350	BQL
3	Di-n-butyl phthalate	350	380
4	Benzyl butyl phthalate	350	BQL
5	bis(2-Ethylhexyl)phthalate	350	BQL
6	Di-n-octylphthalate	350	BQL

Comments: BQL = Below Quantitation Limit



PCB Summary Sheet

IEA Sample No. 237130 1

Sample Identification TP-1A

Date Extracted May 16, 1990

Date Analyzed May 17, 1990

By Hedrick

<u>Compound</u>	<u>SOIL</u>	<u>Results</u>
	<u>Quantitation</u> <u>Limit</u>	<u>Concentration</u> <u>mg/Kg</u>
Aroclor 1016	2.0	BQL
Aroclor 1221	2.0	BQL
Aroclor 1232	2.0	BQL
Aroclor 1242	2.0	7.5
Aroclor 1248	2.0	BQL
Aroclor 1254	2.0	BQL
Aroclor 1260	2.0	BQL
Total Aroclor Concentration	2.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

- (a) Target compound concentration adjusted for % moisture.
(b) Quantitation limit elevated due to sample dilution prior to analysis. (c) Sample diluted due to high concentration of target compounds present.



**Purgeable Halocarbons
SW-846 Method 8010 Compounds**

IEA Sample No.: 237130 2

Sample Identification: TP-1B

Date Collected: May 9, 1990

Date Analyzed: May 15, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Soil</u>	<u>Results</u>
		<u>Quantitation Limit</u> <u>ug/Kg</u>	<u>Concentration</u> <u>ug/Kg</u>
1	Chloromethane	1.0	BQL
2	Bromomethane	1.0	BQL
3	Vinyl Chloride	1.0	BQL
4	Chloroethane	1.0	BQL
5	Methylene chloride	1.0	BQL
6	Trichlorofluoromethane	1.0	BQL
7	1,1-Dichloroethene	1.0	BQL
8	1,1-Dichloroethane	1.0	BQL
9	trans-1,2-Dichloroethene	1.0	BQL
10	Chloroform	1.0	BQL
11	1,2-Dichloroethane	1.0	BQL
12	1,1,1-Trichloroethane	1.0	BQL
13	Carbon tetrachloride	1.0	BQL
14	Bromodichloromethane	1.0	BQL
15	1,2-Dichloropropane	1.0	BQL
16	trans-1,3-Dichloropropene	1.0	BQL
17	Trichloroethene	1.0	BQL
18	cis-1,3-Dichloropropene	1.0	BQL
19	1,1,2-Trichloroethane	1.0	BQL
20	Chlorodibromomethane	1.0	BQL
21	2-Chloroethylvinyl ether	1.0	BQL
22	Bromoform	1.0	BQL
23	Tetrachloroethene	1.0	BQL
24	1,1,2,2-Tetrachloroethane	1.0	BQL
25	Chlorobenzene	1.0	BQL
26	1,3-Dichlorobenzene	1.0	BQL
27	1,2-Dichlorobenzene	1.0	BQL
28	1,4-Dichlorobenzene	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



**Purgeable Aromatics
SW-846 Method 8020 Compounds**

IEA Sample No.: 237130 2
Sample Identification: TP-1B
Date Collected: May 9, 1990

Date Analyzed: May 15, 1990
By: Averill

<u>Number</u>	<u>Compound</u>	<u>Soil</u>	<u>Results</u>
		<u>Quantitation Limit</u> <u>µg/Kg</u>	<u>Concentration</u> <u>µg/Kg</u>
1	Benzene	1.0	BQL
2	Chlorobenzene	1.0	BQL
3	1,2-Dichlorobenzene	1.0	BQL
4	1,3-Dichlorobenzene	1.0	BQL
5	1,4-Dichlorobenzene	1.0	BQL
6	Ethylbenzene	1.0	BQL
7	Toluene	1.0	BQL
8	Total Xylenes	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



Phthalates
EPA Method 606 Compounds

IEA Sample Number: 237130
Sample Identification: TP-1B
Date Collected: May 9, 1990
Date Extracted: May 17, 1990
Date Analyzed: May 21, 1990

2

By: Rich

Number	Compound	Soil Quantitation Limit µg/Kg	Results Concentration µg/Kg
1	Dimethylphthalate	350	BQL
2	Diethylphthalate	350	BQL
3	Di-n-butyl phthalate	350	BQL
4	Benzyl butyl phthalate	350	BQL
5	bis(2-Ethylhexyl)phthalate	350	BQL
6	Di-n-octylphthalate	350	BQL

Comments: **BQL - Below Quantitation Limit**



PCB Summary Sheet

IEA Sample No. 237130 2

Sample Identification TP-1B

Date Extracted May 17, 1990

Date Analyzed May 18, 1990

By Hedrick

<u>Compound</u>	<u>SOIL</u>	<u>Results</u>
	<u>Quantitation</u> <u>Limit</u>	<u>Concentration</u> <u>mg/Kg</u>
Aroclor 1016	0.2	BQL
Aroclor 1221	0.2	BQL
Aroclor 1232	0.2	BQL
Aroclor 1242	0.2	2.1
Aroclor 1248	0.2	BQL
Aroclor 1254	0.2	BQL
Aroclor 1260	0.2	BQL
Total Aroclor Concentration	0.2	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

(a) Target compound concentration adjusted for % moisture.



**Purgeable Halocarbons
SW-846 Method 8010 Compounds**

IEA Sample No.: 237130 3

Sample Identification: TP-1C

Date Collected: May 9, 1990

Date Analyzed: May 15, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Soil</u>	<u>Results</u>
		<u>Quantitation Limit</u> <u>µg/Kg</u>	<u>Concentration</u> <u>µg/Kg</u>
1	Chloromethane	1.0	BQL
2	Bromomethane	1.0	BQL
3	Vinyl Chloride	1.0	BQL
4	Chloroethane	1.0	BQL
5	Methylene chloride	1.0	BQL
6	Trichlorofluoromethane	1.0	BQL
7	1,1-Dichloroethene	1.0	BQL
8	1,1-Dichloroethane	1.0	BQL
9	trans-1,2-Dichloroethene	1.0	BQL
10	Chloroform	1.0	BQL
11	1,2-Dichloroethane	1.0	BQL
12	1,1,1-Trichloroethane	1.0	BQL
13	Carbon tetrachloride	1.0	BQL
14	Bromodichloromethane	1.0	BQL
15	1,2-Dichloropropane	1.0	BQL
16	trans-1,3-Dichloropropene	1.0	BQL
17	Trichloroethene	1.0	BQL
18	cis-1,3-Dichloropropene	1.0	BQL
19	1,1,2-Trichloroethane	1.0	BQL
20	Chlorodibromomethane	1.0	BQL
21	2-Chloroethylvinyl ether	1.0	BQL
22	Bromoform	1.0	BQL
23	Tetrachloroethene	1.0	BQL
24	1,1,2,2-Tetrachloroethane	1.0	BQL
25	Chlorobenzene	1.0	BQL
26	1,3-Dichlorobenzene	1.0	BQL
27	1,2-Dichlorobenzene	1.0	BQL
28	1,4-Dichlorobenzene	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



Purgeable Aromatics
SW-846 Method 8020 Compounds

IEA Sample No.: 237130 3

Sample Identification: TP-1C

Date Collected: May 9, 1990

Date Analyzed: May 15, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Soil</u>	<u>Results</u>
		<u>Quantitation Limit</u>	<u>Concentration</u>
		<u>µg/Kg</u>	<u>µg/Kg</u>
1	Benzene	1.0	BQL
2	Chlorobenzene	1.0	BQL
3	1,2-Dichlorobenzene	1.0	BQL
4	1,3-Dichlorobenzene	1.0	BQL
5	1,4-Dichlorobenzene	1.0	BQL
6	Ethylbenzene	1.0	BQL
7	Toluene	1.0	BQL
8	Total Xylenes	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



Phthalates
EPA Method 606 Compounds

IEA Sample Number: 237130
Sample Identification: TP-1C
Date Collected: May 9, 1990
Date Extracted: May 17, 1990
Date Analyzed: May 21, 1990

3

By: Rich

Number	Compound	Soil Quantitation Limit µg/Kg	Results Concentration µg/Kg
1	Dimethylphthalate	350	BQL
2	Diethylphthalate	350	BQL
3	Di-n-butyl phthalate	350	BQL
4	Benzyl butyl phthalate	350	BQL
5	bis(2-Ethylhexyl)phthalate	350	BQL
6	Di-n-octylphthalate	350	BQL

Comments: BQL - Below Quantitation Limit



PCB Summary Sheet

IEA Sample No. 237130 3

Sample Identification TP-1C

Date Extracted May 17, 1990

Date Analyzed May 18, 1990

By Hedrick

<u>Compound</u>	<u>SOIL</u>	<u>Results</u>
	<u>Quantitation</u> <u>Limit</u>	<u>Concentration</u> <u>mg/Kg</u>
Aroclor 1016	0.2	BQL
Aroclor 1221	0.2	BQL
Aroclor 1232	0.2	BQL
Aroclor 1242	0.2	1.1
Aroclor 1248	0.2	BQL
Aroclor 1254	0.2	BQL
Aroclor 1260	0.2	BQL
Total Aroclor Concentration	0.2	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

(a) Target compound concentration adjusted for % moisture.



Purgeable Halocarbons
SW-846 Method 8010 Compounds

IEA Sample No.: 237130 10

Sample Identification: TP-2A

Date Collected: May 9, 1990

Date Analyzed: May 15, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Soil</u>	<u>Results</u>
		<u>Quantitation Limit</u> <u>µg/Kg</u>	<u>Concentration</u> <u>µg/Kg</u>
1	Chloromethane	1.0	BQL
2	Bromomethane	1.0	BQL
3	Vinyl Chloride	1.0	BQL
4	Chloroethane	1.0	BQL
5	Methylene chloride	1.0	BQL
6	Trichlorofluoromethane	1.0	BQL
7	1,1-Dichloroethene	1.0	BQL
8	1,1-Dichloroethane	1.0	BQL
9	trans-1,2-Dichloroethene	1.0	BQL
10	Chloroform	1.0	BQL
11	1,2-Dichloroethane	1.0	BQL
12	1,1,1-Trichloroethane	1.0	BQL
13	Carbon tetrachloride	1.0	BQL
14	Bromodichloromethane	1.0	BQL
15	1,2-Dichloropropane	1.0	BQL
16	trans-1,3-Dichloropropene	1.0	BQL
17	Trichloroethene	1.0	BQL
18	cis-1,3-Dichloropropene	1.0	BQL
19	1,1,2-Trichloroethane	1.0	BQL
20	Chlorodibromomethane	1.0	BQL
21	2-Chloroethylvinyl ether	1.0	BQL
22	Bromoform	1.0	BQL
23	Tetrachloroethene	1.0	BQL
24	1,1,2,2-Tetrachloroethane	1.0	BQL
25	Chlorobenzene	1.0	BQL
26	1,3-Dichlorobenzene	1.0	BQL
27	1,2-Dichlorobenzene	1.0	BQL
28	1,4-Dichlorobenzene	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



**Purgeable Aromatics
SW-846 Method 8020 Compounds**

IEA Sample No.: 237130 10

Sample Identification: TP-2A

Date Collected: May 9, 1990

Date Analyzed: May 15, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Soil</u>	<u>Results</u>
		<u>Quantitation Limit</u>	<u>Concentration</u>
		<u>µg/Kg</u>	<u>µg/Kg</u>
1	Benzene	1.0	BQL
2	Chlorobenzene	1.0	BQL
3	1,2-Dichlorobenzene	1.0	BQL
4	1,3-Dichlorobenzene	1.0	BQL
5	1,4-Dichlorobenzene	1.0	BQL
6	Ethylbenzene	1.0	BQL
7	Toluene	1.0	BQL
8	Total Xylenes	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



Phthalates
EPA Method 606 Compounds

IEA Sample Number: 237130 **10**

Sample Identification: TP-2A

Date Collected: May 9, 1990

Date Extracted: May 17, 1990

Date Analyzed: May 22, 1990

By: Rich

Number	Compound	Soil Quantitation Limit µg/Kg	Results Concentration µg/Kg
1	Dimethylphthalate	350	BQL
2	Diethylphthalate	350	1100
3	Di-n-butyl phthalate	350	BQL
4	Benzyl butyl phthalate	350	BQL
5	bis(2-Ethylhexyl)phthalate	350	33000
6	Di-n-octylphthalate	350	BQL

Comments: **BQL - Below Quantitation Limit**



PCB Summary Sheet

IEA Sample No. 237130 10

Sample Identification TP-2A

Date Extracted May 17, 1990

Date Analyzed May 18, 1990

By Hedrick

<u>Compound</u>	<u>SOIL</u>	<u>Results</u>
	<u>Quantitation</u> <u>Limit</u>	<u>Concentration</u> <u>mg/Kg</u>
Aroclor 1016	0.2	BQL
Aroclor 1221	0.2	BQL
Aroclor 1232	0.2	BQL
Aroclor 1242	0.2	0.60
Aroclor 1248	0.2	BQL
Aroclor 1254	0.2	BQL
Aroclor 1260	0.2	BQL
Total Aroclor Concentration	0.2	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

(a) Target compound concentration adjusted for % moisture.



**Purgeable Halocarbons
SW-846 Method 8010 Compounds**

IEA Sample No.: 237130 11

Sample Identification: TP-3A

Date Collected: May 9, 1990

Date Analyzed: May 16, 1990

Bg: Averill

<u>Number</u>	<u>Compound</u>	<u>Soil</u>	<u>Results</u>
		<u>Quantitation Limit</u> <u>ug/Kg</u>	<u>Concentration</u> <u>ug/Kg</u>
1	Chloromethane	1.0	BQL
2	Bromomethane	1.0	BQL
3	Vinyl Chloride	1.0	BQL
4	Chloroethane	1.0	BQL
5	Methylene chloride	1.0	BQL
6	Trichlorofluoromethane	1.0	BQL
7	1,1-Dichloroethene	1.0	BQL
8	1,1-Dichloroethane	1.0	BQL
9	trans-1,2-Dichloroethene	1.0	BQL
10	Chloroform	1.0	BQL
11	1,2-Dichloroethane	1.0	BQL
12	1,1,1-Trichloroethane	1.0	BQL
13	Carbon tetrachloride	1.0	BQL
14	Bromodichloromethane	1.0	BQL
15	1,2-Dichloropropane	1.0	BQL
16	trans-1,3-Dichloropropene	1.0	BQL
17	Trichloroethene	1.0	BQL
18	cis-1,3-Dichloropropene	1.0	BQL
19	1,1,2-Trichloroethane	1.0	BQL
20	Chlorodibromomethane	1.0	BQL
21	2-Chloroethylvinyl ether	1.0	BQL
22	Bromoform	1.0	BQL
23	Tetrachloroethene	1.0	BQL
24	1,1,2,2-Tetrachloroethane	1.0	BQL
25	Chlorobenzene	1.0	BQL
26	1,3-Dichlorobenzene	1.0	BQL
27	1,2-Dichlorobenzene	1.0	BQL
28	1,4-Dichlorobenzene	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



**Purgeable Aromatics
SW-846 Method 8020 Compounds**

IEA Sample No.: 237130 11

Sample Identification: TP-3A

Date Collected: May 9, 1990

Date Analyzed: May 15, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Soil</u> <u>Quantitation Limit</u>	<u>Results</u> <u>Concentration</u>
		<u>µg/Kg</u>	<u>µg/Kg</u>
1	Benzene	1.0	BQL
2	Chlorobenzene	1.0	BQL
3	1,2-Dichlorobenzene	1.0	BQL
4	1,3-Dichlorobenzene	1.0	BQL
5	1,4-Dichlorobenzene	1.0	BQL
6	Ethylbenzene	1.0	BQL
7	Toluene	1.0	BQL
8	Total Xylenes	1.0	3

Comments

BQL - BELOW QUANTITATION LIMIT



Phthalates
EPA Method 606 Compounds

IEA Sample Number: 237130

11

Sample Identification: TP-3A

Date Collected: May 9, 1990

Date Extracted: May 17, 1990

By: Rich

Date Analyzed: May 23, 1990

Number	Compound	Soil Quantitation Limit µg/Kg	Results Concentration µg/Kg
1	Dimethylphthalate	18000	BQL
2	Diethylphthalate	18000	BQL
3	Di-n-butyl phthalate	18000	BQL
4	Benzyl butyl phthalate	18000	BQL
5	bis(2-Ethylhexyl)phthalate	18000	3000000
6	Di-n-octylphthalate	18000	BQL

Comments:

BQL - Below Quantitation Limit

**(a) Quantitation limit elevated due to sample
dilution prior to analysis.**

**(b) Sample diluted due to high concentration of
target compounds present.**



PCB Summary Sheet

IEA Sample No. 237130 11

Sample Identification TP-3A

Date Extracted May 17, 1990

Date Analyzed May 18, 1990

By Hedrick

<u>Compound</u>	<u>SOIL</u>	<u>Results</u>
	<u>Quantitation</u> <u>Limit</u>	<u>Concentration</u> <u>mg/Kg</u>
Aroclor 1016	20	BQL
Aroclor 1221	20	BQL
Aroclor 1232	20	BQL
Aroclor 1242	20	77
Aroclor 1248	20	BQL
Aroclor 1254	20	BQL
Aroclor 1260	20	BQL
Total Aroclor Concentration	20	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

(a) Target compound concentration adjusted for % moisture.
(b) Quantitation limit elevated due to sample dilution prior to analysis. (c) Sample diluted due to high concentration of target compounds present.



**Purgeable Halocarbons
SW-846 Method 8010 Compounds**

IEA Sample No.: 237130 12

Sample Identification: TP-4A

Date Collected: May 9, 1990

Date Analyzed: May 16, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Soil</u>	<u>Results</u>
		<u>Quantitation Limit</u> <u>ug/Kg</u>	<u>Concentration</u> <u>ug/Kg</u>
1	Chloromethane	1.0	BQL
2	Bromomethane	1.0	BQL
3	Vinyl Chloride	1.0	BQL
4	Chloroethane	1.0	BQL
5	Methylene chloride	1.0	BQL
6	Trichlorofluoromethane	1.0	BQL
7	1,1-Dichloroethene	1.0	BQL
8	1,1-Dichloroethane	1.0	BQL
9	trans-1,2-Dichloroethene	1.0	BQL
10	Chloroform	1.0	BQL
11	1,2-Dichloroethane	1.0	BQL
12	1,1,1-Trichloroethane	1.0	BQL
13	Carbon tetrachloride	1.0	BQL
14	Bromodichloromethane	1.0	BQL
15	1,2-Dichloropropane	1.0	BQL
16	trans-1,3-Dichloropropene	1.0	BQL
17	Trichloroethene	1.0	BQL
18	cis-1,3-Dichloropropene	1.0	BQL
19	1,1,2-Trichloroethane	1.0	BQL
20	Chlorodibromomethane	1.0	BQL
21	2-Chloroethylvinyl ether	1.0	BQL
22	Bromoform	1.0	BQL
23	Tetrachloroethene	1.0	BQL
24	1,1,2,2-Tetrachloroethane	1.0	BQL
25	Chlorobenzene	1.0	BQL
26	1,3-Dichlorobenzene	1.0	BQL
27	1,2-Dichlorobenzene	1.0	BQL
28	1,4-Dichlorobenzene	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

**Purgeable Aromatics
SW-846 Method 8020 Compounds**

IEA Sample No.: 237130 12

Sample Identification: TP-4A

Date Collected: May 9, 1990

Date Analyzed: May 16, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Soil</u>	<u>Results</u>
		<u>Quantitation Limit</u>	<u>Concentration</u>
		<u>µg/Kg</u>	<u>µg/Kg</u>
1	Benzene	1.0	BQL
2	Chlorobenzene	1.0	BQL
3	1,2-Dichlorobenzene	1.0	BQL
4	1,3-Dichlorobenzene	1.0	BQL
5	1,4-Dichlorobenzene	1.0	BQL
6	Ethylbenzene	1.0	BQL
7	Toluene	1.0	BQL
8	Total Xylenes	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



Phthalates
EPA Method 606 Compounds

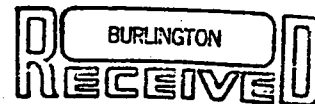
IEA Sample Number: 237130
Sample Identification: TP-4A
Date Collected: May 9, 1990
Date Extracted: May 17, 1990
Date Analyzed: May 22, 1990

12

By: Rich

Number	Compound	Soil Quantitation Limit µg/Kg	Results Concentration µg/Kg
1	Dimethylphthalate	350	BQL
2	Diethylphthalate	350	750
3	Di-n-butyl phthalate	350	1000
4	Benzyl butyl phthalate	350	BQL
5	bis(2-Ethylhexyl)phthalate	350	130000
6	Di-n-octylphthalate	350	BQL

Comments: **BQL - Below Quantitation Limit**



PCB Summary Sheet

JUN 4 1990

IEA Sample No. 237130 12

Sample Identification TP-4A

Date Extracted May 17, 1990

Date Analyzed May 18, 1990

By Hedrick

<u>Compound</u>	<u>Soil</u>	<u>Results</u>
	<u>Quantitation</u>	<u>Concentration</u>
	<u>Limit</u>	<u>mg/Kg</u>
Aroclor 1016	20	BQL
Aroclor 1221	20	BQL
Aroclor 1232	20	BQL
Aroclor 1242	20	37
Aroclor 1248	20	BQL
Aroclor 1254	20	BQL
Aroclor 1260	20	BQL
Total Aroclor Concentration	20	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

- (a) Quantitation limit elevated due to sample dilution prior to analysis. (b) Sample diluted due to high concentration of target compounds present.
(c) Target compound concentration adjusted for % moisture.



**Purgeable Halocarbons
SW-846 Method 8010 Compounds**

IEA Sample No.: 237130 13Sample Identification: TP-5ADate Analyzed: May 16, 1990Date Collected: May 9, 1990By: Averill

<u>Number</u>	<u>Compound</u>	<u>Soil</u>	<u>Results</u>
		<u>Quantitation Limit</u> <u>µg/Kg</u>	<u>Concentration</u> <u>µg/Kg</u>
1	Chloromethane	1.0	BQL
2	Bromomethane	1.0	BQL
3	Vinyl Chloride	1.0	BQL
4	Chloroethane	1.0	BQL
5	Methylene chloride	1.0	BQL
6	Trichlorofluoromethane	1.0	BQL
7	1,1-Dichloroethene	1.0	BQL
8	1,1-Dichloroethane	1.0	BQL
9	trans-1,2-Dichloroethene	1.0	BQL
10	Chloroform	1.0	BQL
11	1,2-Dichloroethane	1.0	BQL
12	1,1,1-Trichloroethane	1.0	BQL
13	Carbon tetrachloride	1.0	BQL
14	Bromodichloromethane	1.0	BQL
15	1,2-Dichloropropane	1.0	BQL
16	trans-1,3-Dichloropropene	1.0	BQL
17	Trichloroethene	1.0	BQL
18	cis-1,3-Dichloropropene	1.0	BQL
19	1,1,2-Trichloroethane	1.0	BQL
20	Chlorodibromomethane	1.0	BQL
21	2-Chloroethylvinyl ether	1.0	BQL
22	Bromoform	1.0	BQL
23	Tetrachloroethene	1.0	BQL
24	1,1,2,2-Tetrachloroethane	1.0	BQL
25	Chlorobenzene	1.0	BQL
26	1,3-Dichlorobenzene	1.0	BQL
27	1,2-Dichlorobenzene	1.0	BQL
28	1,4-Dichlorobenzene	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



Purgeable Aromatics
SW-846 Method 8020 Compounds

IEA Sample No.: 237130 13

Sample Identification: TP-5A

Date Collected: May 9, 1990

Date Analyzed: May 15, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Soil</u>	<u>Results</u>
		<u>Quantitation Limit</u>	<u>Concentration</u>
		<u>µg/Kg</u>	<u>µg/Kg</u>
1	Benzene	1.0	BQL
2	Chlorobenzene	1.0	BQL
3	1,2-Dichlorobenzene	1.0	BQL
4	1,3-Dichlorobenzene	1.0	BQL
5	1,4-Dichlorobenzene	1.0	BQL
6	Ethylbenzene	1.0	BQL
7	Toluene	1.0	BQL
8	Total Xylenes	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



Phthalates
EPA Method 606 Compounds

IEA Sample Number: 237130
Sample Identification: TP-5A
Date Collected: May 9, 1990
Date Extracted: May 17, 1990
Date Analyzed: May 22, 1990

13

By: Rich

Number	Compound	Soil Quantitation Limit µg/Kg	Results Concentration µg/Kg
1	Dimethylphthalate	350	BQL
2	Diethylphthalate	350	BQL
3	Di-n-butyl phthalate	350	930
4	Benzyl butyl phthalate	350	BQL
5	bis(2-Ethylhexyl)phthalate	350	4100
6	Di-n-octylphthalate	350	1100

Comments: BQL - Below Quantitation Limit



PCB Summary Sheet

IEA Sample No. 237130 13Sample Identification TP-5ADate Extracted May 17, 1990Date Analyzed May 18, 1990By Hedrick

<u>Compound</u>	<u>SOIL</u>	<u>Results</u>
	<u>Quantitation</u> <u>Limit</u>	<u>Concentration</u> <u>mg/Kg</u>
Aroclor 1016	2.0	BQL
Aroclor 1221	2.0	BQL
Aroclor 1232	2.0	BQL
Aroclor 1242	2.0	10
Aroclor 1248	2.0	BQL
Aroclor 1254	2.0	BQL
Aroclor 1260	2.0	BQL
Total Aroclor Concentration	2.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

- (a) Target compound concentration adjusted for % moisture.
(b) Quantitation limit elevated due to sample dilution prior to analysis. (c) Sample diluted due to high concentration of target compounds present.



Purgeable Halocarbons
SW-846 Method 8010 Compounds

IEA Sample No.: 237130 15

Sample Identification: TP-5C

Date Collected: May 9, 1990

Date Analyzed: May 15, 1990

By: Averill

Number	Compound	Soil	Results
		Quantitation Limit <u>µg/Kg</u>	Concentration <u>µg/Kg</u>
1	Chloromethane	1.0	BQL
2	Bromomethane	1.0	BQL
3	Vinyl Chloride	1.0	BQL
4	Chloroethane	1.0	BQL
5	Methylene chloride	1.0	BQL
6	Trichlorofluoromethane	1.0	BQL
7	1,1-Dichloroethene	1.0	BQL
8	1,1-Dichloroethane	1.0	BQL
9	trans-1,2-Dichloroethene	1.0	BQL
10	Chloroform	1.0	BQL
11	1,2-Dichloroethane	1.0	BQL
12	1,1,1-Trichloroethane	1.0	BQL
13	Carbon tetrachloride	1.0	BQL
14	Bromodichloromethane	1.0	BQL
15	1,2-Dichloropropane	1.0	BQL
16	trans-1,3-Dichloropropene	1.0	BQL
17	Trichloroethene	1.0	BQL
18	cis-1,3-Dichloropropene	1.0	BQL
19	1,1,2-Trichloroethane	1.0	BQL
20	Chlorodibromomethane	1.0	BQL
21	2-Chloroethylvinyl ether	1.0	BQL
22	Bromoform	1.0	BQL
23	Tetrachloroethene	1.0	BQL
24	1,1,2,2-Tetrachloroethane	1.0	BQL
25	Chlorobenzene	1.0	BQL
26	1,3-Dichlorobenzene	1.0	BQL
27	1,2-Dichlorobenzene	1.0	BQL
28	1,4-Dichlorobenzene	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



**Purgeable Aromatics
SW-846 Method 8020 Compounds**

IEA Sample No.: 237130 15

Sample Identification: TP-5C

Date Collected: May 9, 1990

Date Analyzed: May 15, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Soil</u>	<u>Results</u>
		<u>Quantitation Limit</u>	<u>Concentration</u>
		<u>µg/Kg</u>	<u>µg/Kg</u>
1	Benzene	1.0	BQL
2	Chlorobenzene	1.0	BQL
3	1,2-Dichlorobenzene	1.0	BQL
4	1,3-Dichlorobenzene	1.0	BQL
5	1,4-Dichlorobenzene	1.0	BQL
6	Ethylbenzene	1.0	BQL
7	Toluene	1.0	BQL
8	Total Xylenes.	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



Phthalates
EPA Method 606 Compounds

IEA Sample Number: 237130
Sample Identification: TP-5C
Date Collected: May 9, 1990
Date Extracted: May 17, 1990
Date Analyzed: May 23, 1990

15

By: Rich

Number	Compound	Soil Quantitation Limit µg/Kg	Results Concentration µg/Kg
1	Dimethylphthalate	350	BQL
2	Diethylphthalate	350	BQL
3	Di-n-butyl phthalate	350	BQL
4	Benzyl butyl phthalate	350	BQL
5	bis(2-Ethylhexyl)phthalate	350	BQL
6	Di-n-octylphthalate	350	BQL

Comments: BQL - Below Quantitation Limit



PCB Summary Sheet

IEA Sample No. 237130 15

Sample Identification TP-5C

Date Extracted May 17, 1990

Date Analyzed May 18, 1990

By Hedrick

<u>Compound</u>	<u>SOIL</u>	<u>Results</u>
	<u>Quantitation</u> <u>Limit</u>	<u>Concentration</u> <u>mg/Kg</u>
Aroclor 1016	0.2	BQL
Aroclor 1221	0.2	BQL
Aroclor 1232	0.2	BQL
Aroclor 1242	0.2	0.3
Aroclor 1248	0.2	BQL
Aroclor 1254	0.2	BQL
Aroclor 1260	0.2	BQL
Total Aroclor Concentration	0.2	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

(a) Target compound concentration adjusted for % moisture.



Purgeable Halocarbons
SW-846 Method 8010 Compounds

IEA Sample No.: 237130 14

Sample Identification: TP-6A

Date Collected: May 9, 1990

Date Analyzed: May 16, 1990

By: Averill

Number	Compound	Soil	Results
		Quantitation Limit	Concentration
		$\mu\text{g/Kg}$	$\mu\text{g/Kg}$
1	Chloromethane	1.0	BQL
2	Bromomethane	1.0	BQL
3	Vinyl Chloride	1.0	BQL
4	Chloroethane	1.0	BQL
5	Methylene chloride	1.0	BQL
6	Trichlorofluoromethane	1.0	BQL
7	1,1-Dichloroethene	1.0	BQL
8	1,1-Dichloroethane	1.0	BQL
9	trans-1,2-Dichloroethene	1.0	BQL
10	Chloroform	1.0	BQL
11	1,2-Dichloroethane	1.0	BQL
12	1,1,1-Trichloroethane	1.0	BQL
13	Carbon tetrachloride	1.0	BQL
14	Bromodichloromethane	1.0	BQL
15	1,2-Dichloropropane	1.0	BQL
16	trans-1,3-Dichloropropene	1.0	BQL
17	Trichloroethene	1.0	BQL
18	cis-1,3-Dichloropropene	1.0	BQL
19	1,1,2-Trichloroethane	1.0	BQL
20	Chlorodibromomethane	1.0	BQL
21	2-Chloroethylvinyl ether	1.0	BQL
22	Bromoform	1.0	BQL
23	Tetrachloroethene	1.0	BQL
24	1,1,2,2-Tetrachloroethane	1.0	BQL
25	Chlorobenzene	1.0	BQL
26	1,3-Dichlorobenzene	1.0	BQL
27	1,2-Dichlorobenzene	1.0	BQL
28	1,4-Dichlorobenzene	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



Industrial & Environmental Analysts, Inc.
P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

Purgeable Aromatics
SW-846 Method 8020 Compounds

IEA Sample No.: 237130 14

Sample Identification: TP-6A

Date Collected: May 9, 1990

Date Analyzed: May 16, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Soil</u>	<u>Results</u>
		<u>Quantitation Limit</u>	<u>Concentration</u>
		<u>µg/Kg</u>	<u>µg/Kg</u>
1	Benzene	1.0	BQL
2	Chlorobenzene	1.0	BQL
3	1,2-Dichlorobenzene	1.0	BQL
4	1,3-Dichlorobenzene	1.0	BQL
5	1,4-Dichlorobenzene	1.0	BQL
6	Ethylbenzene	1.0	BQL
7	Toluene	1.0	BQL
8	Total Xylenes	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

Offices and laboratories located in: Essex Junction, Vermont
Research Triangle Park, North Carolina



Phthalates
EPA Method 606 Compounds

IER Sample Number: 237130

14

Sample Identification: TP-6A

Date Collected: May 9, 1990

Date Extracted: May 17, 1990

By: Rich

Date Analyzed: May 23, 1990

Number	Compound	Soil Quantitation Limit µg/Kg	Results Concentration µg/Kg
1	Dimethylphthalate	350	BQL
2	Diethylphthalate	350	BQL
3	Di-n-butyl phthalate	350	BQL
4	Benzyl butyl phthalate	350	BQL
5	bis(2-Ethylhexyl)phthalate	350	4100
6	Di-n-octylphthalate	350	BQL

Comments: BQL - Below Quantitation Limit



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

PCB Summary Sheet

IEA Sample No. 237130 14

Sample Identification TP-6A

Date Extracted May 17, 1990

Date Analyzed May 18, 1990

By Hedrick

<u>Compound</u>	<u>SOIL</u>	<u>Results</u>
	<u>Quantitation</u> <u>Limit</u>	<u>Concentration</u> <u>mg/Kg</u>
Aroclor 1016	2.0	BQL
Aroclor 1221	2.0	BQL
Aroclor 1232	2.0	BQL
Aroclor 1242	2.0	13
Aroclor 1248	2.0	BQL
Aroclor 1254	2.0	BQL
Aroclor 1260	2.0	BQL
Total Aroclor Concentration	2.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

(a) Target compound concentration adjusted for % moisture.
(b) Quantitation limit elevated due to sample dilution prior to analysis. (c) Sample diluted due to high concentration of target compounds present.

Offices and laboratories located in: Essex Junction, Vermont
Research Triangle Park, North Carolina



**Purgeable Halocarbons
SW-846 Method 8010 Compounds**

IEA Sample No.: 237130 16Sample Identification: TP-6CDate Collected: May 9, 1990Date Analyzed: May 16, 1990By: Averill

<u>Number</u>	<u>Compound</u>	<u>Soil</u>	<u>Results</u>
		<u>Quantitation Limit</u> <u>µg/Kg</u>	<u>Concentration</u> <u>µg/Kg</u>
1	Chloromethane	1.0	BQL
2	Bromomethane	1.0	BQL
3	Vinyl Chloride	1.0	BQL
4	Chloroethane	1.0	BQL
5	Methylene chloride	1.0	BQL
6	Trichlorofluoromethane	1.0	BQL
7	1,1-Dichloroethene	1.0	BQL
8	1,1-Dichloroethane	1.0	BQL
9	trans-1,2-Dichloroethene	1.0	BQL
10	Chloroform	1.0	BQL
11	1,2-Dichloroethane	1.0	BQL
12	1,1,1-Trichloroethane	1.0	BQL
13	Carbon tetrachloride	1.0	BQL
14	Bromodichloromethane	1.0	BQL
15	1,2-Dichloropropane	1.0	BQL
16	trans-1,3-Dichloropropene	1.0	BQL
17	Trichloroethene	1.0	BQL
18	cis-1,3-Dichloropropene	1.0	BQL
19	1,1,2-Trichloroethane	1.0	BQL
20	Chlorodibromomethane	1.0	BQL
21	2-Chloroethylvinyl ether	1.0	BQL
22	Bromoform	1.0	BQL
23	Tetrachloroethene	1.0	BQL
24	1,1,2,2-Tetrachloroethane	1.0	BQL
25	Chlorobenzene	1.0	BQL
26	1,3-Dichlorobenzene	1.0	BQL
27	1,2-Dichlorobenzene	1.0	BQL
28	1,4-Dichlorobenzene	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



Industrial & Environmental Analysts, Inc.
P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

**Purgeable Aromatics
SW-846 Method 8020 Compounds**

IEA Sample No.: 237130 16

Sample Identification: TP-6C

Date Collected: May 9, 1990

Date Analyzed: May 16, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Soil</u>	<u>Results</u>
		<u>Quantitation Limit</u> <u>µg/Kg</u>	<u>Concentration</u> <u>µg/Kg</u>
1	Benzene	1.0	BQL
2	Chlorobenzene	1.0	BQL
3	1,2-Dichlorobenzene	1.0	BQL
4	1,3-Dichlorobenzene	1.0	BQL
5	1,4-Dichlorobenzene	1.0	BQL
6	Ethylbenzene	1.0	BQL
7	Toluene	1.0	BQL
8	Total Xylenes	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

Offices and laboratories located in: Essex Junction, Vermont
Research Triangle Park, North Carolina



Phthalates
EPA Method 606 Compounds

IER Sample Number: 237130

16

Sample Identification: TP-6C

Date Collected: May 9, 1990

Date Extracted: May 17, 1990

By: Rich

Date Analyzed: May 23, 1990

Number	Compound	Soil Quantitation Limit µg/Kg	Results Concentration µg/Kg
1	Dimethylphthalate	350	BQL
2	Diethylphthalate	350	BQL
3	Di-n-butyl phthalate	350	660
4	Benzyl butyl phthalate	350	BQL
5	bis(2-Ethylhexyl)phthalate	350	BQL
6	Di-n-octylphthalate	350	BQL

Comments: BQL - Below Quantitation Limit



PCB Summary Sheet

IEA Sample No. 237130 16

Sample Identification TP-6C

Date Extracted May 17, 1990

Date Analyzed May 18, 1990

By Hedrick

<u>Compound</u>	<u>SOIL</u>	<u>Results</u>
	<u>Quantitation</u>	<u>Concentration</u>
	<u>Limit</u>	<u>mg/Kg</u>
Aroclor 1016	20	BQL
Aroclor 1221	20	BQL
Aroclor 1232	20	BQL
Aroclor 1242	20	35
Aroclor 1248	20	BQL
Aroclor 1254	20	BQL
Aroclor 1260	20	BQL
Total Aroclor Concentration	20	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

(a) Target compound concentration adjusted for % moisture.
(b) Quantitation limit elevated due to sample dilution prior to analysis. (c) Sample diluted due to high concentration of target compounds present.



PCB Summary Sheet

IEA Sample No. 237130 7

Sample Identification BF1-4

Date Extracted May 17, 1990

Date Analyzed May 18, 1990

By Hedrick

<u>Compound</u>	<u>SOIL</u>	<u>Results</u>
	<u>Quantitation</u> <u>Limit</u>	<u>Concentration</u> <u>mg/Kg</u>
Aroclor 1016	0.2	BQL
Aroclor 1221	0.2	BQL
Aroclor 1232	0.2	BQL
Aroclor 1242	0.2	BQL
Aroclor 1248	0.2	BQL
Aroclor 1254	0.2	BQL
Aroclor 1260	0.2	BQL
Total Aroclor Concentration	0.2	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



PCB Summary Sheet

IEA Sample No. 237130 8Sample Identification 1-4 South compositeDate Extracted May 17, 1990Date Analyzed May 18, 1990By Hedrick

<u>Compound</u>	<u>SOIL</u>	<u>Results</u>
	<u>Quantitation</u> <u>Limit</u>	<u>Concentration</u> <u>mg/Kg</u>
Aroclor 1016	20	BQL
Aroclor 1221	20	BQL
Aroclor 1232	20	BQL
Aroclor 1242	20	20
Aroclor 1248	20	BQL
Aroclor 1254	20	BQL
Aroclor 1260	20	BQL
Total Aroclor Concentration	20	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

(a) Target compound concentration adjusted for % moisture.
(b) Quantitation limit elevated due to sample dilution prior to analysis. (c) Sample diluted due to high concentration of target compounds present.



PCB Summary Sheet

IEA Sample No. 237130 17

Sample Identification Street Drain

Date Extracted May 17, 1990

Date Analyzed May 18, 1990

By Hedrick

<u>Compound</u>	<u>Soil</u>	<u>Results</u>
	<u>Quantitation</u> <u>Limit</u>	<u>Concentration</u> <u>mg/Kg</u>
Aroclor 1016	0.2	BQL
Aroclor 1221	0.2	BQL
Aroclor 1232	0.2	BQL
Aroclor 1242	0.2	BQL
Aroclor 1248	0.2	BQL
Aroclor 1254	0.2	BQL
Aroclor 1260	0.2	BQL
Total Aroclor Concentration	0.2	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

(a) Target compound concentration adjusted for % moisture.

APPENDIX D
TEST PIT WATER QUALITY DATA



Purgeable Halocarbons
EPA Method 601 Compounds

IEA Sample No.: 237130 4

Sample Identification: TP1-GW

Date Collected: May 9, 1990

Date Analyzed: May 24, 1990

By: Hendricks

Number	Compound	Water	Results
		Quantitation Limit	Concentration
		<u>ug/L</u>	<u>ug/L</u>
1	Chloromethane	1.0	BQL
2	Bromomethane	1.0	BQL
3	Vinyl Chloride	1.0	BQL
4	Dichlorodifluoromethane	1.0	BQL
5	Chloroethane	1.0	BQL
6	Methylene chloride	1.0	BQL
7	Trichlorofluoromethane	1.0	BQL
8	1,1-Dichloroethene	1.0	BQL
9	1,1-Dichloroethane	1.0	BQL
10	trans-1,2-Dichloroethene	1.0	BQL
11	Chloroform	1.0	BQL
12	1,2-Dichloroethane	1.0	BQL
13	1,1,1-Trichloroethane	1.0	BQL
14	Carbon tetrachloride	1.0	BQL
15	Bromodichloromethane	1.0	BQL
16	1,2-Dichloropropane	1.0	BQL
17	trans-1,3-Dichloropropene	1.0	BQL
18	Trichloroethene	1.0	BQL
19	cis-1,3-Dichloropropene	1.0	BQL
20	1,1,2-Trichloroethane	1.0	BQL
21	Chlorodibromomethane	1.0	BQL
22	2-Chloroethylvinyl ether	1.0	BQL
23	Bromoform	1.0	BQL
24	Tetrachloroethene	1.0	BQL
25	1,1,2,2-Tetrachloroethane	1.0	BQL
26	Chlorobenzene	1.0	BQL
27	1,3-Dichlorobenzene	1.0	BQL
28	1,2-Dichlorobenzene	1.0	BQL
29	1,4-Dichlorobenzene	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



**Purgeable Aromatics
EPA Method 602 Compounds**

IEA Sample No.: 237130 4
Sample Identification: TP1-GW
Date Collected: May 9, 1990

Date Analyzed: May 25, 1990
By: Hendricks

<u>Number</u>	<u>Compound</u>	<u>Water</u>	<u>Results</u>
		<u>Quantitation Limit</u>	<u>Concentration</u>
		<u>µg/L</u>	<u>µg/L</u>
1	Benzene	1.0	BQL
2	Chlorobenzene	1.0	BQL
3	1,2-Dichlorobenzene	1.0	BQL
4	1,3-Dichlorobenzene	1.0	BQL
5	1,4-Dichlorobenzene	1.0	BQL
6	Ethylbenzene	1.0	BQL
7	Toluene	1.0	BQL
8	Total Xylenes	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



Phthalates
EPA Method 606 Compounds

IEA Sample Number: 237130
Sample Identification: TP1-6W
Date Collected: May 9, 1990
Date Extracted: May 15, 1990
Date Analyzed: May 21, 1990

4

By: Rich

Number	Compound	Water Quantitation Limit µg/L	Results Concentration µg/L
1	Dimethylphthalate	20	BQL
2	Diethylphthalate	20	BQL
3	Di-n-butyl phthalate	20	BQL
4	Benzyl butyl phthalate	20	BQL
5	bis(2-Ethylhexyl)phthalate	20	130
6	Di-n-octylphthalate	20	BQL

Comments: BQL = Below Quantitation Limit



PCB Summary Sheet

IEA Sample No. 237130 4

Sample Identification TP1-GW

Date Extracted May 16, 1990

Date Analyzed May 17, 1990

By Hedrick

<u>Compound</u>	<u>Water</u>	<u>Results</u>
	<u>Quantitation</u> <u>Limit</u>	<u>Concentration</u> <u>µg/L</u>
Aroclor 1016	2.0	BQL
Aroclor 1221	2.0	BQL
Aroclor 1232	2.0	BQL
Aroclor 1242	2.0	30
Aroclor 1248	2.0	BQL
Aroclor 1254	2.0	BQL
Aroclor 1260	2.0	BQL
Total Aroclor Concentration	2.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

(a) Quantitation limit elevated due to a smaller amount of sample extracted.



Purgeable Halocarbons
EPA Method 601 Compounds

IEA Sample No.: 237130 5Sample Identification: TP-2GWDate Collected: May 9, 1990Date Analyzed: May 24, 1990By: Hendricks

Number	Compound	Water	Results
		Quantitation Limit µg/L	Concentration µg/L
1	Chloromethane	1.0	BQL
2	Bromomethane	1.0	BQL
3	Vinyl Chloride	1.0	BQL
4	Dichlorodifluoromethane	1.0	BQL
5	Chloroethane	1.0	BQL
6	Methylene chloride	1.0	BQL
7	Trichlorofluoromethane	1.0	BQL
8	1,1-Dichloroethene	1.0	BQL
9	1,1-Dichloroethane	1.0	BQL
10	trans-1,2-Dichloroethene	1.0	BQL
11	Chloroform	1.0	BQL
12	1,2-Dichloroethane	1.0	BQL
13	1,1,1-Trichloroethane	1.0	19
14	Carbon tetrachloride	1.0	BQL
15	Bromodichloromethane	1.0	BQL
16	1,2-Dichloropropane	1.0	BQL
17	trans-1,3-Dichloropropene	1.0	BQL
18	Trichloroethene	1.0	23
19	cis-1,3-Dichloropropene	1.0	BQL
20	1,1,2-Trichloroethane	1.0	BQL
21	Chlorodibromomethane	1.0	BQL
22	2-Chloroethylvinyl ether	1.0	BQL
23	Bromoform	1.0	BQL
24	Tetrachloroethene	1.0	BQL
25	1,1,2,2-Tetrachloroethane	1.0	BQL
26	Chlorobenzene	1.0	BQL
27	1,3-Dichlorobenzene	1.0	BQL
28	1,2-Dichlorobenzene	1.0	BQL
29	1,4-Dichlorobenzene	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



Purgeable Aromatics
EPA Method 602 Compounds

IEA Sample No.: 237130 5

Sample Identification: TP-2GW

Date Collected: May 9, 1990

Date Analyzed: May 25, 1990

By: Hendricks

<u>Number</u>	<u>Compound</u>	<u>Water</u>	<u>Results</u>
		<u>Quantitation Limit</u>	<u>Concentration</u>
		<u>µg/L</u>	<u>µg/L</u>
1	Benzene	1.0	BQL
2	Chlorobenzene	1.0	BQL
3	1,2-Dichlorobenzene	1.0	BQL
4	1,3-Dichlorobenzene	1.0	BQL
5	1,4-Dichlorobenzene	1.0	BQL
6	Ethylbenzene	1.0	BQL
7	Toluene	1.0	BQL
8	Total Xylenes	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



Phthalates
EPA Method 606 Compounds

IEA Sample Number: 237130 5
Sample Identification: TP-26W
Date Collected: May 9, 1990
Date Extracted: May 17, 1990
Date Analyzed: May 21, 1990

By: Rich

Number	Compound	Water Quantitation Limit µg/L	Results Concentration µg/L
1	Dimethylphthalate	20	BQL
2	Diethylphthalate	20	BQL
3	Di-n-butyl phthalate	20	BQL
4	Benzyl butyl phthalate	20	BQL
5	bis(2-Ethylhexyl)phthalate	20	230
6	Di-n-octylphthalate	20	BQL

Comments: BQL - Below Quantitation Limit



PCB Summary Sheet

IEA Sample No. 237130 5

Sample Identification TP-2GW

Date Extracted May 16, 1990

Date Analyzed May 17, 1990

By Hedrick

<u>Compound</u>	<u>Water</u>	<u>Results</u>
	<u>Quantitation</u>	<u>Concentration</u>
	<u>Limit</u>	<u>ug/L</u>
Aroclor 1016	1.0	BQL
Aroclor 1221	1.0	BQL
Aroclor 1232	1.0	BQL
Aroclor 1242	1.0	5.5
Aroclor 1248	1.0	BQL
Aroclor 1254	1.0	BQL
Aroclor 1260	1.0	BQL
Total Aroclor Concentration	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



Purgeable Halocarbons
EPA Method 601 Compounds

IEA Sample No.: 237130 6

Sample Identification: TP-3GW

Date Collected: May 9, 1990

Date Analyzed: May 24, 1990

By: Hendricks

Number	Compound	Water	Results
		Quantitation Limit µg/L	Concentration µg/L
1	Chloromethane	1.0	BQL
2	Bromomethane	1.0	BQL
3	Vinyl Chloride	1.0	BQL
4	Dichlorodifluoromethane	1.0	BQL
5	Chloroethane	1.0	BQL
6	Methylene chloride	1.0	BQL
7	Trichlorofluoromethane	1.0	BQL
8	1,1-Dichloroethene	1.0	BQL
9	1,1-Dichloroethane	1.0	22
10	trans-1,2-Dichloroethene	1.0	7
11	Chloroform	1.0	BQL
12	1,2-Dichloroethane	1.0	BQL
13	1,1,1-Trichloroethane	1.0	8
14	Carbon tetrachloride	1.0	BQL
15	Bromodichloromethane	1.0	BQL
16	1,2-Dichloropropane	1.0	BQL
17	trans-1,3-Dichloropropene	1.0	BQL
18	Trichloroethene	1.0	BQL
19	cis-1,3-Dichloropropene	1.0	BQL
20	1,1,2-Trichloroethane	1.0	BQL
21	Chlorodibromomethane	1.0	BQL
22	2-Chloroethylvinyl ether	1.0	BQL
23	Bromoform	1.0	BQL
24	Tetrachloroethene	1.0	BQL
25	1,1,2,2-Tetrachloroethane	1.0	BQL
26	Chlorobenzene	1.0	8
27	1,3-Dichlorobenzene	1.0	BQL
28	1,2-Dichlorobenzene	1.0	BQL
29	1,4-Dichlorobenzene	1.0	23

Comments

BQL - BELOW QUANTITATION LIMIT



**Purgeable Aromatics
EPA Method 602 Compounds**

IEA Sample No.: 237130 6
Sample Identification: TP-3GW
Date Collected: May 9, 1990

Date Analyzed: May 25, 1990
By: Hendricks

<u>Number</u>	<u>Compound</u>	<u>Water</u>	<u>Results</u>
		<u>Quantitation Limit</u>	<u>Concentration</u>
		<u>ug/L</u>	<u>ug/L</u>
1	Benzene	1.0	BQL
2	Chlorobenzene	1.0	8
3	1,2-Dichlorobenzene	1.0	BQL
4	1,3-Dichlorobenzene	1.0	BQL
5	1,4-Dichlorobenzene	1.0	36
6	Ethylbenzene	1.0	10
7	Toluene	1.0	48
8	Total Xylenes	1.0	79

Comments

BQL - BELOW QUANTITATION LIMIT



Phthalates
EPA Method 606 Compounds

IEA Sample Number: 237130
Sample Identification: TP-36W
Date Collected: May 9, 1990
Date Extracted: May 17, 1990
Date Analyzed: May 23, 1990

6

By: Rich

Number	Compound	Water Quantitation Limit µg/L	Results Concentration µg/L
1	Dimethylphthalate	20000	BQL
2	Diethylphthalate	20000	23000
3	Di-n-butyl phthalate	20000	BQL
4	Benzyl butyl phthalate	20000	BQL
5	bis(2-Ethylhexyl)phthalate	20000	5500000
6	Di-n-octylphthalate	20000	BQL

Comments:

BQL = Below Quantitation Limit

(a) Quantitation limit elevated due to sample dilution prior to analysis.

(b) Sample diluted due to high concentration of target compounds present.



PCB Summary Sheet

IEA Sample No. 237130 6

Sample Identification TP-3GW

Date Extracted May 16, 1990

Date Analyzed May 17, 1990

By Hedrick

<u>Compound</u>	<u>Water</u>	<u>Results</u>
	<u>Quantitation</u>	<u>Concentration</u>
	<u>Limit</u>	<u>µg/L</u>
Aroclor 1016	20	BQL
Aroclor 1221	20	BQL
Aroclor 1232	20	BQL
Aroclor 1242	20	3000
Aroclor 1248	20	BQL
Aroclor 1254	20	BQL
Aroclor 1260	20	BQL
Total Aroclor Concentration	20	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

(a) Quantitation limit elevated due to a smaller amount of sample extracted. (b) Quantitation limit elevated due to sample dilution prior to analysis. (c) Sample diluted due to high concentration of target compounds present.



Purgeable Halocarbons
EPA Method 601 Compounds

IEA Sample No.: 237130 9

Sample Identification: TP-SGW

Date Collected: May 9, 1990

Date Analyzed: May 24, 1990

By: Hendricks

Number	Compound	Water	Results
		Quantitation Limit	Concentration
		<u>ug/L</u>	<u>ug/L</u>
1	Chloromethane	1.0	BQL
2	Bromomethane	1.0	BQL
3	Vinyl Chloride	1.0	BQL
4	Dichlorodifluoromethane	1.0	BQL
5	Chloroethane	1.0	BQL
6	Methylene chloride	1.0	BQL
7	Trichlorofluoromethane	1.0	BQL
8	1,1-Dichloroethene	1.0	BQL
9	1,1-Dichloroethane	1.0	BQL
10	trans-1,2-Dichloroethene	1.0	BQL
11	Chloroform	1.0	1
12	1,2-Dichloroethane	1.0	BQL
13	1,1,1-Trichloroethane	1.0	BQL
14	Carbon tetrachloride	1.0	BQL
15	Bromodichloromethane	1.0	BQL
16	1,2-Dichloropropane	1.0	BQL
17	trans-1,3-Dichloropropene	1.0	BQL
18	Trichloroethene	1.0	BQL
19	cis-1,3-Dichloropropene	1.0	BQL
20	1,1,2-Trichloroethane	1.0	BQL
21	Chlorodibromomethane	1.0	BQL
22	2-Chloroethylvinyl ether	1.0	BQL
23	Bromoform	1.0	BQL
24	Tetrachloroethene	1.0	BQL
25	1,1,2,2-Tetrachloroethane	1.0	BQL
26	Chlorobenzene	1.0	BQL
27	1,3-Dichlorobenzene	1.0	BQL
28	1,2-Dichlorobenzene	1.0	BQL
29	1,4-Dichlorobenzene	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



Purgeable Aromatics
EPA Method 602 Compounds

IEA Sample No.: 237130 9
Sample Identification: TP-SGW
Date Collected: May 9, 1990

Date Analyzed: May 25, 1990
By: Hendricks

<u>Number</u>	<u>Compound</u>	<u>Water</u>	<u>Results</u>
		<u>Quantitation Limit</u>	<u>Concentration</u>
		<u>µg/L</u>	<u>µg/L</u>
1	Benzene	1.0	BQL
2	Chlorobenzene	1.0	BQL
3	1,2-Dichlorobenzene	1.0	BQL
4	1,3-Dichlorobenzene	1.0	BQL
5	1,4-Dichlorobenzene	1.0	BQL
6	Ethylbenzene	1.0	BQL
7	Toluene	1.0	BQL
8	Total Xylenes	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



Phthalates
EPA Method 606 Compounds

IER Sample Number: 237130
Sample Identification: TP-56W
Date Collected: May 9, 1990
Date Extracted: May 17, 1990
Date Analyzed: May 23, 1990

9

By: Rich

Number	Compound	Water Quantitation Limit µg/L	Results Concentration µg/L
1	Dimethylphthalate	20	BQL
2	Diethylphthalate	20	BQL
3	Di-n-butyl phthalate	20	BQL
4	Benzyl butyl phthalate	20	BQL
5	bis(2-Ethylhexyl)phthalate	20	150
6	Di-n-octylphthalate	20	BQL

Comments: BQL - Below Quantitation Limit

APPENDIX E
GROUNDWATER CHEMICAL DATA



PCB Summary Sheet

IEA Sample No. 237130 9

Sample Identification TP-5GW

Date Extracted May 16, 1990

Date Analyzed May 17, 1990

By Hedrick

<u>Compound</u>	<u>Water</u>	<u>Results</u>
	<u>Quantitation</u>	<u>Concentration</u>
	<u>Limit</u>	<u>µg/L</u>
Aroclor 1016	20	BQL
Aroclor 1221	20	BQL
Aroclor 1232	20	BQL
Aroclor 1242	20	6.6
Aroclor 1248	20	BQL
Aroclor 1254	20	BQL
Aroclor 1260	20	BQL
Total Aroclor Concentration	20	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



INDUSTRIAL & ENVIRONMENTAL
ANALYSTS, INC.
1801 NORTH HARRISON AVE.
CARY, N.C. 27513

CHAIN OF CUSTODY RECORD

NO. 441

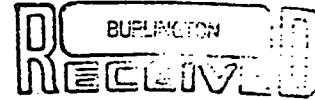
PROJECT #		PROJECT NAME		# OF CONTAINERS	REQUESTED PARAMETERS												
00272.01		TARD			MATRIX												
SAMPLERS: (SIGNATURE)					SOIL	WATER	601/602	606/608	2012								
SAMPLE I.D.	DATE	TIME	STATION LOCATION														
HW 1A	6/14	12:30		7	✓	3	3	1									
HW 2A	6/14	9:30		7	✓	3	3	1									
HW 3A	6/14	11:30	10% separate phase	7	✓	3	3	1									
HW 3B	6/13	17:00		7	✓	3	3	1									
HW 4A	6/13	19:15		7	✓	3	3	1									
HW 6A	6/13	18:00		7	✓	3	3	1									
HW 9A	6/13	17:30	field blank	7	✓	3	3	1									
<p>* Note to Lab: HW 1A, 3A, 3B may have higher volatile readings</p>																	
RELINQUISHED BY (SIGNATURE)		DATE	TIME	RECEIVED BY (SIGNATURE)		DATE	TIME	IEA QUOTE NO.		IEA RUSH NO.							
Christie Ward		6/13	19:00	B J Tubs		6/13	19:00										
RELINQUISHED BY (SIGNATURE)		DATE	TIME	RECEIVED FOR LAB BY		DATE	TIME	PROJECT MANAGER (PLEASE PRINT)		P.O. NO.							
B J Tubs		6/14/90	0745	Brad Elbert				B. FRANKS		39950							
IEA REMARKS										FIELD REMARKS							
										<p>Note: dates are off. samples labeled 6/13 were collected 6/12 and those labeled 6/14 were collected 6/13. Chris Ward</p>							



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

July 2, 1990



JUL 2 1990

Bernie Franks
Wehran Envirotech
1 Mill Street/Chace Mill
Burlington, VT 05401-1532

Dear Bernie:

Transmitted herewith are the results of analyses performed on samples delivered to IEA on June 14, 1990.

Please note that the samples numbered 3 and 4 (MW-3A and MW-3B, respectively) separated into distinct oil and water phases. These phases were analyzed separately by EPA Method 601/602 and EPA Method 608 (PCBs).

If I may be of any further service, please do not hesitate to contact me.

Sincerely,

INDUSTRIAL & ENVIRONMENTAL ANALYSTS, INC.

Paul

Paul S. Warden
Staff Scientist

PSW/skb

Reference: 237-165

Offices and laboratories located in: Essex Junction, Vermont
Research Triangle Park, North Carolina



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

LAB RESULTS

7/2/90

Wehran Engineering
1 Mill Street, Chace Mill
Burlington, VT 05401-1532

IEA # 237165

Date Received: 6/14/90

Date Collected: 6/13/90

Total Samples Received: 7

Total Parameters Requested: 28

Attention: Bernie Franks/C. Sprague

Reviewed & Approved by

[Signature]

#	Sample I.D.	Parameter Studied	Results	Comments
1	MW 1A	EPA METHOD 606 COMPOUNDS	-	See attached sheets.
2	MW 2A	EPA METHOD 606 COMPOUNDS	-	See attached sheets.
3	MW 3A	EPA METHOD 606 COMPOUNDS	-	See attached sheets.
4	MW 3B	EPA METHOD 606 COMPOUNDS	-	See attached sheets.
5	MW 4A	EPA METHOD 606 COMPOUNDS	-	See attached sheets.
6	MW 6A	EPA METHOD 606 COMPOUNDS	-	See attached sheets.
7	MW 9A	EPA METHOD 606 COMPOUNDS	-	See attached sheets.
1	MW 1A	GC Methods601/602	-	See attached sheets.
2	MW 2A	GC Methods601/602	-	See attached sheets.
3	MW 3A	GC Methods601/602	-	See attached sheets.
4	MW 3B	GC Methods601/602	-	See attached sheets.
5	MW 4A	GC Methods601/602	-	See attached sheets.
6	MW 6A	GC Methods601/602	-	See attached sheets.
7	MW 9A	GC Methods601/602	-	See attached sheets.
1	MW 1A	PCB in water	-	See attached sheets.
2	MW 2A	PCB in water	-	See attached sheets.
3	MW 3A	PCB in water	-	See attached sheets.
4	MW 3B	PCB in water	-	See attached sheets.
5	MW 4A	PCB in water	-	See attached sheets.
6	MW 6A	PCB in water	-	See attached sheets.
7	MW 9A	PCB in water	-	See attached sheets.
1	MW 1A	Zinc, total	0.214 mg/L	
2	MW 2A	Zinc, total	0.032 mg/L	
3	MW 3A	Zinc, total	3.19 mg/L	
4	MW 3B	Zinc, total	5.90 mg/L	

Comments:

Offices and laboratories located in: Essex Junction, Vermont
Research Triangle Park, North Carolina



Industrial & Environmental Analysts, Inc.
P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

LAB RESULTS

7/2/90

Wehran Engineering
1 Mill Street, Chace Mill
Burlington, VT 05401-1532

IEA # 237165

Date Received: 6/14/90

Date Collected: 6/13/90

Total Samples Received: 7

Total Parameters Requested: 28

Reviewed & Approved by

Attention: Bernie Franks/C. Sprague

#	Sample I.D.	Parameter Studied	Results	Comments
5	MW 4A	Zinc, total	0.073 mg/L	
6	MW 6A	Zinc, total	0.065 mg/L	
7	MW 9A	Zinc, total	<0.005 mg/L	

Comments:

Offices and laboratories located in: Essex Junction, Vermont
Research Triangle Park, North Carolina



Purgeable Halocarbons
EPA Method 601 Compounds

IEA Sample No.: 237165 1

Sample Identification: MW 1A

Date Collected: June 13, 1990

Date Analyzed: June 21, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Water</u>	<u>Results</u>
		<u>Quantitation Limit</u> <u>µg/L</u>	<u>Concentration</u> <u>µg/L</u>
1	Chloromethane	1	BQL
2	Bromomethane	1	BQL
3	Vinyl Chloride	1	BQL
4	Dichlorodifluoromethane	1	BQL
5	Chloroethane	1	BQL
6	Methylene chloride	1	BQL
7	Trichlorofluoromethane	1	BQL
8	1,1-Dichloroethene	1	BQL
9	1,1-Dichloroethane	1	BQL
10	trans-1,2-Dichloroethene	1	BQL
11	Chloroform	1	BQL
12	1,2-Dichloroethane	1	BQL
13	1,1,1-Trichloroethane	1	BQL
14	Carbon tetrachloride	1	BQL
15	Bromodichloromethane	1	BQL
16	1,2-Dichloropropane	1	BQL
17	trans-1,3-Dichloropropene	1	BQL
18	Trichloroethene	1	BQL
19	cis-1,3-Dichloropropene	1	BQL
20	1,1,2-Trichloroethane	1	BQL
21	Chlorodibromomethane	1	BQL
22	2-Chloroethylvinyl ether	1	BQL
23	Bromoform	1	BQL
24	Tetrachloroethene	1	BQL
25	1,1,2,2-Tetrachloroethane	1	BQL
26	Chlorobenzene	1	BQL
27	1,3-Dichlorobenzene	1	BQL
28	1,2-Dichlorobenzene	1	BQL
29	1,4-Dichlorobenzene	1	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



Industrial & Environmental Analysts, Inc.
P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

Purgeable Aromatics
EPA Method 602 Compounds

IEA Sample No.: 237165 1

Sample Identification: MW 1A

Date Collected: June 13, 1990

Date Analyzed: June 21, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Water</u>	<u>Results</u>
		<u>Quantitation Limit</u>	<u>Concentration</u>
		<u>µg/L</u>	<u>µg/L</u>
1	Benzene	1.0	BQL
2	Chlorobenzene	1.0	BQL
3	1,2-Dichlorobenzene	1.0	BQL
4	1,3-Dichlorobenzene	1.0	BQL
5	1,4-Dichlorobenzene	1.0	BQL
6	Ethylbenzene	1.0	BQL
7	Toluene	1.0	BQL
8	Total Xylenes	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

Offices and laboratories located in: Essex Junction, Vermont
Research Triangle Park, North Carolina



Industrial & Environmental Analysts, Inc.
P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

Phthalates
EPA Method 606 Compounds

IER Sample Number: 237165
Sample Identification: MW 1A
Date Collected: June 13, 1990
Date Extracted: June 20, 1990
Date Analyzed: June 26, 1990

1

By: Joquin

Number	Compound	Water Quantitation Limit µg/L	Results Concentration µg/L
1	Dimethylphthalate	10	BQL
2	Diethylphthalate	10	BQL
3	Di-n-butyl phthalate	10	BQL
4	Benzyl butyl phthalate	10	BQL
5	bis(2-Ethylhexyl)phthalate	10	33
6	Di-n-octylphthalate	10	BQL

Comments: BQL = Below Quantitation Limit



PCB Summary Sheet

IEA Sample No. 237165 1

Sample Identification MW 1A

Date Extracted June 20, 1990

Date Analyzed June 20, 1990

By Hedrick/Travis

<u>Compound</u>	<u>Water</u>	<u>Results</u>
	<u>Quantitation</u> <u>Limit</u>	<u>Concentration</u> <u>µg/L</u>
Aroclor 1016	1.0	BQL
Aroclor 1221	1.0	BQL
Aroclor 1232	1.0	BQL
Aroclor 1242	1.0	2.2
Aroclor 1248	1.0	BQL
Aroclor 1254	1.0	BQL
Aroclor 1260	1.0	BQL
Total Aroclor Concentration	1.0	2.2

Comments

BQL - BELOW QUANTITATION LIMIT
Water phase



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

Purgeable Halocarbons
EPA Method 601 Compounds

IEA Sample No.: 237165 2

Sample Identification: MW 2A

Date Collected: June 13, 1990

Date Analyzed: June 21, 1990

By: Averill

Number	Compound	Water	Results
		Quantitation Limit	Concentration
		µg/L	µg/L
1	Chloromethane	1	BQL
2	Bromomethane	1	BQL
3	Vinyl Chloride	1	BQL
4	Dichlorodifluoromethane	1	BQL
5	Chloroethane	1	BQL
6	Methylene chloride	1	BQL
7	Trichlorofluoromethane	1	BQL
8	1,1-Dichloroethene	1	BQL
9	1,1-Dichloroethane	1	BQL
10	trans-1,2-Dichloroethene	1	BQL
11	Chloroform	1	BQL
12	1,2-Dichloroethane	1	BQL
13	1,1,1-Trichloroethane	1	BQL
14	Carbon tetrachloride	1	BQL
15	Bromodichloromethane	1	BQL
16	1,2-Dichloropropane	1	BQL
17	trans-1,3-Dichloropropene	1	BQL
18	Trichloroethene	1	BQL
19	cis-1,3-Dichloropropene	1	BQL
20	1,1,2-Trichloroethane	1	BQL
21	Chlorodibromomethane	1	BQL
22	2-Chloroethylvinyl ether	1	BQL
23	Bromoform	1	BQL
24	Tetrachloroethene	1	BQL
25	1,1,2,2-Tetrachloroethane	1	BQL
26	Chlorobenzene	1	BQL
27	1,3-Dichlorobenzene	1	BQL
28	1,2-Dichlorobenzene	1	BQL
29	1,4-Dichlorobenzene	1	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

**Purgeable Aromatics
EPA Method 602 Compounds**

IEA Sample No.: 237165 2

Sample Identification: MW 2A

Date Collected: June 13, 1990

Date Analyzed: June 21, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Water</u>	<u>Results</u>
		<u>Quantitation Limit</u>	<u>Concentration</u>
		<u>ug/L</u>	<u>ug/L</u>
1	Benzene	1.0	BQL
2	Chlorobenzene	1.0	BQL
3	1,2-Dichlorobenzene	1.0	BQL
4	1,3-Dichlorobenzene	1.0	BQL
5	1,4-Dichlorobenzene	1.0	BQL
6	Ethylbenzene	1.0	BQL
7	Toluene	1.0	BQL
8	Total Xylenes	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT



Industrial & Environmental Analysts, Inc.
P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

Phthalates
EPA Method 606 Compounds

IER Sample Number: 237165
Sample Identification: MW 2A
Date Collected: June 13, 1990
Date Extracted: June 20, 1990
Date Analyzed: June 26, 1990

2

By: Joquin

Number	Compound	Water Quantitation Limit µg/L	Results Concentration µg/L
1	Dimethylphthalate	10	BQL
2	Diethylphthalate	10	BQL
3	Di-n-butyl phthalate	10	BQL
4	Benzyl butyl phthalate	10	BQL
5	bis(2-Ethylhexyl)phthalate	10	52
6	Di-n-octylphthalate	10	BQL

Comments: BQL - Below Quantitation Limit



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

PCB Summary Sheet

IEA Sample No. 237165 2

Sample Identification MW 2A

Date Extracted June 20, 1990

Date Analyzed June 20, 1990

By Hedrick/Travis

<u>Compound</u>	<u>Water</u>	<u>Results</u>
	<u>Quantitation</u>	<u>Concentration</u>
	<u>Limit</u>	<u>µg/L</u>
Aroclor 1016	1.0	BQL
Aroclor 1221	1.0	BQL
Aroclor 1232	1.0	BQL
Aroclor 1242	1.0	9.3
Aroclor 1248	1.0	BQL
Aroclor 1254	1.0	BQL
Aroclor 1260	1.0	BQL
Total Aroclor Concentration	1.0	9.3

Comments

BQL - BELOW QUANTITATION LIMIT

Water phase



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138
Purgeable Halocarbons

EPA Method 601 Compounds

IEA Sample No.: 237165 3

Sample Identification: MW 3A

Date Collected: June 13, 1990

Date Analyzed: June 26, 1990

By: Averill

Number	Compound	Water	Results
		Quantitation Limit <u>µg/L</u>	Concentration <u>µg/L</u>
1	Chloromethane	1.0	BQL
2	Bromomethane	1.0	BQL
3	Vinyl Chloride	1.0	3
4	Dichlorodifluoromethane	1.0	BQL
5	Chloroethane	1.0	1
6	Methylene chloride	1.0	BQL
7	Trichlorofluoromethane	1.0	BQL
8	1,1-Dichloroethene	1.0	BQL
9	1,1-Dichloroethane	1.0	24
10	trans-1,2-Dichloroethene	1.0	14
11	Chloroform	1.0	BQL
12	1,2-Dichloroethane	1.0	BQL
13	1,1,1-Trichloroethane	1.0	6
14	Carbon tetrachloride	1.0	BQL
15	Bromodichloromethane	1.0	BQL
16	1,2-Dichloropropane	1.0	BQL
17	trans-1,3-Dichloropropene	1.0	BQL
18	Trichloroethene	1.0	BQL
19	cis-1,3-Dichloropropene	1.0	BQL
20	1,1,2-Trichloroethane	1.0	BQL
21	Chlorodibromomethane	1.0	BQL
22	2-Chloroethylvinyl ether	1.0	BQL
23	Bromoform	1.0	BQL
24	Tetrachloroethene	1.0	BQL
25	1,1,2,2-Tetrachloroethane	1.0	BQL
26	Chlorobenzene	1.0	BQL
27	1,3-Dichlorobenzene	1.0	1
28	1,2-Dichlorobenzene	1.0	BQL
29	1,4-Dichlorobenzene	1.0	12

Comments

BQL - BELOW QUANTITATION LIMIT

Water phase



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

Purgeable Aromatics EPA Method 602 Compounds

IEA Sample No.: 237165 3

Sample Identification: MW 3A

Date Collected: June 13, 1990

Date Analyzed: June 26, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Water</u>	<u>Results</u>
		<u>Quantitation Limit</u>	<u>Concentration</u>
		<u>µg/L</u>	<u>µg/L</u>
1	Benzene	1.0	BQL
2	Chlorobenzene	1.0	BQL
3	1,2-Dichlorobenzene	1.0	BQL
4	1,3-Dichlorobenzene	1.0	4
5	1,4-Dichlorobenzene	1.0	17
6	Ethylbenzene	1.0	1
7	Toluene	1.0	11
8	Total Xylenes	1.0	3

Comments

BQL - BELOW QUANTITATION LIMIT

Water phase



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

Phthalates
EPA Method 606 Compounds

IEA Sample Number: 237165

3

Sample Identification: MW 3A

Date Collected: June 13, 1990

Date Extracted: June 20, 1990

Date Analyzed: June 26, 1990

By: Joquin

Number	Compound	Water Quantitation Limit µg/L	Results Concentration µg/L
1	Dimethylphthalate	880,000	BQL
2	Diethylphthalate	880,000	BQL
3	Di-n-butyl phthalate	880,000	BQL
4	Benzyl butyl phthalate	880,000	BQL
5	bis(2-Ethylhexyl)phthalate	880,000	110,000,000
6	Di-n-octylphthalate	880,000	BQL

Comments: BQL = Below Quantitation Limit

(a) Quantitation limit elevated due to sample dilution prior to analysis.

(b) Sample diluted due to high concentration of target compounds present.



PCB Summary Sheet

IEA Sample No. 237165 3

Sample Identification MW-3A

Date Extracted June 20, 1990

Date Analyzed June 26, 1990

By Travis

<u>Compound</u>	<u>Water</u>	<u>Results</u>
	<u>Quantitation</u> <u>Limit</u>	<u>Concentration</u> <u>µg/L</u>
Aroclor 1016	75,000	BQL
Aroclor 1221	75,000	BQL
Aroclor 1232	75,000	BQL
Aroclor 1242	75,000	390,000
Aroclor 1248	75,000	BQL
Aroclor 1254	75,000	BQL
Aroclor 1260	75,000	BQL
Total Aroclor Concentration	75,000	390,000

Comments

BQL - BELOW QUANTITATION LIMIT

Water phase

Quantitation limit elevated due to sample dilution prior to analysis.

Sample diluted due to high concentration of target compounds present.



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

Purgeable Halocarbons EPA Method 601 Compounds

IEA Sample No.: 237165 3

Sample Identification: MW 3A

Date Collected: June 13, 1990

Date Analyzed: June 26, 1990

By: Averill

Number	Compound	Quantitation Limit	Results
		<u>ug/L</u>	<u>Concentration</u> <u>ug/L</u>
1	Chloromethane	500	BQL
2	Bromomethane	500	BQL
3	Vinyl Chloride	500	BQL
4	Dichlorodifluoromethane	500	BQL
5	Chloroethane	500	BQL
6	Methylene chloride	500	BQL
7	Trichlorofluoromethane	500	BQL
8	1,1-Dichloroethene	500	BQL
9	1,1-Dichloroethane	500	2200
10	trans-1,2-Dichloroethene	500	1400
11	Chloroform	500	BQL
12	1,2-Dichloroethane	500	BQL
13	1,1,1-Trichloroethane	500	2500
14	Carbon tetrachloride	500	BQL
15	Bromodichloromethane	500	BQL
16	1,2-Dichloropropane	500	BQL
17	trans-1,3-Dichloropropene	500	BQL
18	Trichloroethene	500	BQL
19	cis-1,3-Dichloropropene	500	BQL
20	1,1,2-Trichloroethane	500	BQL
21	Chlorodibromomethane	500	BQL
22	2-Chloroethylvinyl ether	500	BQL
23	Bromoform	500	BQL
24	Tetrachloroethene	500	BQL
25	1,1,2,2-Tetrachloroethane	500	BQL
26	Chlorobenzene	500	550
27	1,3-Dichlorobenzene	500	1500
28	1,2-Dichlorobenzene	500	BQL
29	1,4-Dichlorobenzene	500	14,000

Comments

BQL - BELOW QUANTITATION LIMIT

Oil Phase.

Quantitation limit elevated due to sample dilution prior to analysis.

Sample diluted due to high concentration of target compounds present.

Offices and laboratories located in: Essex Junction, Vermont
Research Triangle Park, North Carolina



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

**Purgeable Aromatics
EPA Method 602**

IEA Sample No.: 237165 3

Sample Identification: MW 3A

Date Collected: June 13, 1990

Date Analyzed: June 26, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Quantitation Limit</u>	<u>Results</u>
		<u>µg/L</u>	<u>Concentration</u> <u>µg/L</u>
1	Benzene	500	BQL
2	Chlorobenzene	500	550
3	1,2-Dichlorobenzene	500	BQL
4	1,3-Dichlorobenzene	500	1500
5	1,4-Dichlorobenzene	500	14,000
6	Ethylbenzene	500	BQL
7	Toluene	500	BQL
8	Total Xylenes	500	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

Oil Phase.

Quantitation limit elevated due to sample dilution prior to analysis.

Sample diluted due to presence of non-target compounds.



Industrial & Environmental Analysts, Inc.
P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

PCB Summary Sheet

IEA Sample No. 237165 3

Sample Identification MW 3A

Date Extracted June 20, 1990

Date Analyzed June 26, 1990

By Travis

<u>Compound</u>	<u>Oil</u>	<u>Results</u>
	<u>Quantitation</u>	<u>Concentration</u>
	<u>Limit</u>	<u>mg/Kg</u>
Aroclor 1016	100	BQL
Aroclor 1221	100	BQL
Aroclor 1232	100	BQL
Aroclor 1242	100	2500
Aroclor 1248	100	BQL
Aroclor 1254	100	BQL
Aroclor 1260	100	BQL
Total Aroclor Concentration	100	2500

Comments

BQL - BELOW QUANTITATION LIMIT

Oil phase

Quantitation limit elevated due to sample dilution prior to analysis.

Sample diluted due to high concentration of target compounds present.



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

Purgeable Halocarbons

EPA Method 601 Compounds

IEA Sample No.: 237165 4

Sample Identification: MW 3B

Date Collected: June 13, 1990

Date Analyzed: June 26, 1990

By: Averill

Number	Compound	Water	Results
		Quantitation Limit	Concentration
		<u>ug/L</u>	<u>ug/L</u>
1	Chloromethane	1.0	BQL
2	Bromomethane	1.0	BQL
3	Vinyl Chloride	1.0	3
4	Dichlorodifluoromethane	1.0	BQL
5	Chloroethane	1.0	1
6	Methylene chloride	1.0	BQL
7	Trichlorofluoromethane	1.0	BQL
8	1,1-Dichloroethene	1.0	BQL
9	1,1-Dichloroethane	1.0	24
10	trans-1,2-Dichloroethene	1.0	15
11	Chloroform	1.0	1
12	1,2-Dichloroethane	1.0	BQL
13	1,1,1-Trichloroethane	1.0	7
14	Carbon tetrachloride	1.0	BQL
15	Bromodichloromethane	1.0	BQL
16	1,2-Dichloropropane	1.0	BQL
17	trans-1,3-Dichloropropene	1.0	BQL
18	Trichloroethene	1.0	BQL
19	cis-1,3-Dichloropropene	1.0	BQL
20	1,1,2-Trichloroethane	1.0	BQL
21	Chlorodibromomethane	1.0	BQL
22	2-Chloroethylvinyl ether	1.0	BQL
23	Bromoform	1.0	BQL
24	Tetrachloroethene	1.0	BQL
25	1,1,2,2-Tetrachloroethane	1.0	BQL
26	Chlorobenzene	1.0	BQL
27	1,3-Dichlorobenzene	1.0	2
28	1,2-Dichlorobenzene	1.0	BQL
29	1,4-Dichlorobenzene	1.0	16

Comments

BQL - BELOW QUANTITATION LIMIT

Water phase



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

**Purgeable Aromatics
EPA Method 602 Compounds**

IEA Sample No.: 237165 4

Sample Identification: MW 3B

Date Collected: June 13, 1990

Date Analyzed: June 26, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Water</u>	<u>Results</u>
		<u>Quantitation Limit</u>	<u>Concentration</u>
		<u>ug/L</u>	<u>ug/L</u>
1	Benzene	1.0	BQL
2	Chlorobenzene	1.0	BQL
3	1,2-Dichlorobenzene	1.0	BQL
4	1,3-Dichlorobenzene	1.0	7
5	1,4-Dichlorobenzene	1.0	24
6	Ethylbenzene	1.0	2
7	Toluene	1.0	13
8	Total Xylenes	1.0	17

Comments

BQL - BELOW QUANTITATION LIMIT
Water phase



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

Phthalates EPA Method 606 Compounds

IER Sample Number: 237165

4

Sample Identification: MW 3B

Date Collected: June 13, 1990

Date Extracted: June 20, 1990

Date Analyzed: June 26, 1990

By: Joquin

Number	Compound	Water Quantitation Limit µg/L	Results Concentration µg/L
1	Dimethylphthalate	940,000	BQL
2	Diethylphthalate	940,000	BQL
3	Di-n-butyl phthalate	940,000	BQL
4	Benzyl butyl phthalate	940,000	BQL
5	bis(2-Ethylhexyl)phthalate	940,000	98,000,000
6	Di-n-octylphthalate	940,000	BQL

Comments: BQL = Below Quantitation Limit



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

PCB Summary Sheet

IEA Sample No. 237165 4

Sample Identification MW 3B

Date Extracted June 20, 1990

Date Analyzed June 26, 1990

By Travis

<u>Compound</u>	<u>Water</u>	<u>Results</u>
	<u>Quantitation</u>	<u>Concentration</u>
	<u>Limit</u>	<u>µg/L</u>
Aroclor 1016	58,000	BQL
Aroclor 1221	58,000	BQL
Aroclor 1232	58,000	BQL
Aroclor 1242	58,000	280,000
Aroclor 1248	58,000	BQL
Aroclor 1254	58,000	BQL
Aroclor 1260	58,000	BQL
Total Aroclor Concentration	58,000	280,000

Comments

BQL - BELOW QUANTITATION LIMIT

Water phase

Quantitation limit elevated due to sample dilution prior to analysis.

Sample diluted due to high concentration of target compounds present.



Purgeable Halocarbons
EPA Method 601 Compounds

IEA Sample No.: 237165 4

Sample Identification: MW 3B

Date Collected: June 13, 1990

Date Analyzed: June 26, 1990

By: Averill

Number	Compound	Oil	Results
		Quantitation Limit <u>µg/L</u>	Concentration <u>µg/L</u>
1	Chloromethane	500	BQL
2	Bromomethane	500	BQL
3	Vinyl Chloride	500	BQL
4	Dichlorodifluoromethane	500	BQL
5	Chloroethane	500	BQL
6	Methylene chloride	500	BQL
7	Trichlorofluoromethane	500	BQL
8	1,1-Dichloroethene	500	BQL
9	1,1-Dichloroethane	500	2100
10	trans-1,2-Dichloroethene	500	1500
11	Chloroform	500	BQL
12	1,2-Dichloroethane	500	BQL
13	1,1,1-Trichloroethane	500	2400
14	Carbon tetrachloride	500	BQL
15	Bromodichloromethane	500	BQL
16	1,2-Dichloropropane	500	BQL
17	trans-1,3-Dichloropropene	500	BQL
18	Trichloroethene	500	BQL
19	cis-1,3-Dichloropropene	500	BQL
20	1,1,2-Trichloroethane	500	BQL
21	Chlorodibromomethane	800	BQL
22	2-Chloroethylvinyl ether	500	BQL
23	Bromoform	500	BQL
24	Tetrachloroethene	500	BQL
25	1,1,2,2-Tetrachloroethane	500	BQL
26	Chlorobenzene	500	570
27	1,3-Dichlorobenzene	500	1500
28	1,2-Dichlorobenzene	500	BQL
29	1,4-Dichlorobenzene	500	14,000

Comments

BQL - BELOW QUANTITATION LIMIT

(a) Oil Phase

(b) Quantitation limit elevated due to sample dilution prior to analysis.

(c) Sample diluted due to high concentration of target compounds present.



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

Purgeable Aromatics
EPA Method 602 Compounds

IEA Sample No.: 237165 4

Sample Identification: MW 3B

Date Collected: June 13, 1990

Date Analyzed: June 26, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Oil</u>	<u>Results</u>
		<u>Quantitation Limit</u>	<u>Concentration</u>
		<u>µg/L</u>	<u>µg/L</u>
1	Benzene	500	BQL
2	Chlorobenzene	500	720
3	1,2-Dichlorobenzene	500	BQL
4	1,3-Dichlorobenzene	500	10,000
5	1,4-Dichlorobenzene	500	30,000
6	Ethylbenzene	500	1,800
7	Toluene	500	8,400
8	Total Xylenes	500	16,000

Comments

BQL - BELOW QUANTITATION LIMIT

Oil phase

Quantitation limit elevated due to sample dilution prior to analysis.

Sample diluted due to high concentration of target compounds present.



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

PCB Summary Sheet

IEA Sample No. 237165 4

Sample Identification MW 3B

Date Extracted June 26, 1990

Date Analyzed June 26, 1990

By Travis

<u>Compound</u>	<u>Oil</u>	<u>Results</u>
	<u>Quantitation</u>	<u>Concentration</u>
	<u>Limit</u>	<u>mg/Kg</u>
Aroclor 1016	100	BQL
Aroclor 1221	100	BQL
Aroclor 1232	100	BQL
Aroclor 1242	100	3100
Aroclor 1248	100	BQL
Aroclor 1254	100	BQL
Aroclor 1260	100	BQL
Total Aroclor Concentration	100	3100

Comments

BQL - BELOW QUANTITATION LIMIT

Oil phase

Quantitation limit elevated due to sample dilution prior to analysis.

Sample diluted due to high concentration of target compounds present.



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

Purgeable Halocarbons
EPA Method 601 Compounds

IEA Sample No.: 237165 5

Sample Identification: MW 4A

Date Collected: June 13, 1990

Date Analyzed: June 22, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Water</u>	<u>Results</u>
		<u>Quantitation Limit</u> <u>µg/L</u>	<u>Concentration</u> <u>µg/L</u>
1	Chloromethane	1	BQL
2	Bromomethane	1	BQL
3	Vinyl Chloride	1	BQL
4	Dichlorodifluoromethane	1	BQL
5	Chloroethane	1	BQL
6	Methylene chloride	1	BQL
7	Trichlorofluoromethane	1	BQL
8	1,1-Dichloroethene	1	BQL
9	1,1-Dichloroethane	1	BQL
10	trans-1,2-Dichloroethene	1	BQL
11	Chloroform	1	BQL
12	1,2-Dichloroethane	1	BQL
13	1,1,1-Trichloroethane	1	4
14	Carbon tetrachloride	1	BQL
15	Bromodichloromethane	1	BQL
16	1,2-Dichloropropane	1	BQL
17	trans-1,3-Dichloropropene	1	BQL
18	Trichloroethene	1	BQL
19	cis-1,3-Dichloropropene	1	BQL
20	1,1,2-Trichloroethane	1	BQL
21	Chlorodibromomethane	1	BQL
22	2-Chloroethylvinyl ether	1	BQL
23	Bromoform	1	BQL
24	Tetrachloroethene	1	BQL
25	1,1,2,2-Tetrachloroethane	1	BQL
26	Chlorobenzene	1	BQL
27	1,3-Dichlorobenzene	1	BQL
28	1,2-Dichlorobenzene	1	BQL
29	1,4-Dichlorobenzene	1	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

Offices and laboratories located in: Essex Junction, Vermont
Research Triangle Park, North Carolina



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

**Purgeable Aromatics
EPA Method 602 Compounds**

IEA Sample No.: 237165 5

Sample Identification: MW 4A

Date Collected: June 13, 1990

Date Analyzed: June 22, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Water</u>	<u>Results</u>
		<u>Quantitation Limit</u>	<u>Concentration</u>
		<u>ug/L</u>	<u>ug/L</u>
1	Benzene	1.0	BQL
2	Chlorobenzene	1.0	BQL
3	1,2-Dichlorobenzene	1.0	BQL
4	1,3-Dichlorobenzene	1.0	BQL
5	1,4-Dichlorobenzene	1.0	BQL
6	Ethylbenzene	1.0	BQL
7	Toluene	1.0	BQL
8	Total Xylenes	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

Water phase



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

Phthalates

EPA Method 606 Compounds

IER Sample Number: 237165

5

Sample Identification: MW 4A

Date Collected: June 13, 1990

Date Extracted: June 20, 1990

Date Analyzed: June 26, 1990

By: Joquin

Number	Compound	Water Quantitation Limit µg/L	Results Concentration µg/L
1	Dimethylphthalate	10	BQL
2	Diethylphthalate	10	BQL
3	Di-n-butyl phthalate	10	BQL
4	Benzyl butyl phthalate	10	BQL
5	bis(2-Ethylhexyl)phthalate	10	38
6	Di-n-octylphthalate	10	BQL

Comments: BQL = Below Quantitation Limit



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

PCB Summary Sheet

IEA Sample No. 237165 5

Sample Identification MW 4A

Date Extracted June 20, 1990

Date Analyzed June 20, 1990

By Hedrick/Travis

<u>Compound</u>	<u>Water</u>	<u>Results</u>
	<u>Quantitation</u>	<u>Concentration</u>
	<u>Limit</u>	<u>µg/L</u>
Aroclor 1016	1.0	BQL
Aroclor 1221	1.0	BQL
Aroclor 1232	1.0	BQL
Aroclor 1242	1.0	23
Aroclor 1248	1.0	BQL
Aroclor 1254	1.0	BQL
Aroclor 1260	1.0	BQL
Total Aroclor Concentration	1.0	23

Comments

BQL - BELOW QUANTITATION LIMIT
Water phase



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

Purgeable Hglocarbons EPA Method 601 Compounds

IEA Sample No.: 237165 6

Sample Identification: MW 6A

Date Collected: June 13, 1990

Date Analyzed: June 22, 1990

By: Averill

Number	Compound	Water	Results
		Quantitation Limit	Concentration
		<u>µg/L</u>	<u>µg/L</u>
1	Chloromethane	1	BQL
2	Bromomethane	1	BQL
3	Vinyl Chloride	1	BQL
4	Dichlorodifluoromethane	1	BQL
5	Chloroethane	1	BQL
6	Methylene chloride	1	BQL
7	Trichlorofluoromethane	1	BQL
8	1,1-Dichloroethene	1	BQL
9	1,1-Dichloroethane	1	11
10	trans-1,2-Dichloroethene	1	1
11	Chloroform	1	BQL
12	1,2-Dichloroethane	1	BQL
13	1,1,1-Trichloroethane	1	6
14	Carbon tetrachloride	1	BQL
15	Bromodichloromethane	1	BQL
16	1,2-Dichloropropane	1	BQL
17	trans-1,3-Dichloropropene	1	BQL
18	Trichloroethene	1	6
19	cis-1,3-Dichloropropene	1	BQL
20	1,1,2-Trichloroethane	1	BQL
21	Chlorodibromomethane	1	BQL
22	2-Chloroethylvinyl ether	1	BQL
23	Bromoform	1	BQL
24	Tetrachloroethene	1	BQL
25	1,1,2,2-Tetrachloroethane	1	BQL
26	Chlorobenzene	1	BQL
27	1,3-Dichlorobenzene	1	BQL
28	1,2-Dichlorobenzene	1	BQL
29	1,4-Dichlorobenzene	1	7

Comments

BQL - BELOW QUANTITATION LIMIT

Offices and laboratories located in: Essex Junction, Vermont
Research Triangle Park, North Carolina



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

Purgeable Aromatics EPA Method 602 Compounds

IEA Sample No.: 237165 6

Sample Identification: MW 6A

Date Collected: June 13, 1990

Date Analyzed: June 22, 1990

Bq: Averill

<u>Number</u>	<u>Compound</u>	<u>Water</u>	<u>Results</u>
		<u>Quantitation Limit</u>	<u>Concentration</u>
		<u>ug/L</u>	<u>ug/L</u>
1	Benzene	1.0	BQL
2	Chlorobenzene	1.0	BQL
3	1,2-Dichlorobenzene	1.0	BQL
4	1,3-Dichlorobenzene	1.0	BQL
5	1,4-Dichlorobenzene	1.0	7
6	Ethylbenzene	1.0	BQL
7	Toluene	1.0	BQL
8	Total Xylenes	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT
Water phase



Phthalates
EPA Method 606 Compounds

IEA Sample Number: 237165
Sample Identification: MW 6A
Date Collected: June 13, 1990
Date Extracted: June 20, 1990
Date Analyzed: June 26, 1990

6

By: Joquin

Number	Compound	Water Quantitation Limit µg/L	Results Concentration µg/L
1	Dimethylphthalate	100	BQL
2	Diethylphthalate	100	BQL
3	Di-n-butyl phthalate	100	BQL
4	Benzyl butyl phthalate	100	BQL
5	bis(2-Ethylhexyl)phthalate	100	2800
6	Di-n-octylphthalate	100	BQL

Comments: BQL = Below Quantitation Limit



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

PCB Summary Sheet

IEA Sample No. 237165 6

Sample Identification MW 6A

Date Extracted June 20, 1990

Date Analyzed June 20, 1990

By Hedrick

<u>Compound</u>	<u>Water</u>	<u>Results</u>
	<u>Quantitation</u> <u>Limit</u>	<u>Concentration</u> <u>µg/L</u>
Aroclor 1016	10.0	BQL
Aroclor 1221	10.0	BQL
Aroclor 1232	10.0	BQL
Aroclor 1242	10.0	160
Aroclor 1248	10.0	BQL
Aroclor 1254	10.0	BQL
Aroclor 1260	10.0	BQL
Total Aroclor Concentration	10.0	160

Comments

BQL - BELOW QUANTITATION LIMIT

Water phase

Quantitation limit elevated due to sample dilution prior to analysis.

Sample diluted due to high concentration of target compounds present.



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

Purgeable Halocarbons EPA Method 601 Compounds

IEA Sample No.: 237165 7

Sample Identification: MW 9A

Date Collected: June 13, 1990

Date Analyzed: June 22, 1990

Bq: Averill

Number	Compound	Water	Results
		Quantitation Limit	Concentration
		<u>ug/L</u>	<u>ug/L</u>
1	Chloromethane	1	BQL
2	Bromomethane	1	BQL
3	Vinyl Chloride	1	BQL
4	Dichlorodifluoromethane	1	BQL
5	Chloroethane	1	BQL
6	Methylene chloride	1	BQL
7	Trichlorofluoromethane	1	BQL
8	1,1-Dichloroethene	1	BQL
9	1,1-Dichloroethane	1	BQL
10	trans-1,2-Dichloroethene	1	BQL
11	Chloroform	1	BQL
12	1,2-Dichloroethane	1	BQL
13	1,1,1-Trichloroethane	1	BQL
14	Carbon tetrachloride	1	BQL
15	Bromodichloromethane	1	BQL
16	1,2-Dichloropropane	1	BQL
17	trans-1,3-Dichloropropene	1	BQL
18	Trichloroethene	1	BQL
19	cis-1,3-Dichloropropene	1	BQL
20	1,1,2-Trichloroethane	1	BQL
21	Chlorodibromomethane	1	BQL
22	2-Chloroethylvinyl ether	1	BQL
23	Bromoform	1	BQL
24	Tetrachloroethene	1	BQL
25	1,1,2,2-Tetrachloroethane	1	BQL
26	Chlorobenzene	1	BQL
27	1,3-Dichlorobenzene	1	BQL
28	1,2-Dichlorobenzene	1	BQL
29	1,4-Dichlorobenzene	1	BQL

Comments

BQL - BELOW QUANTITATION LIMIT

Offices and laboratories located in: Essex Junction, Vermont
Research Triangle Park, North Carolina



Industrial & Environmental Analysts, Inc.
P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

Purgeable Aromatics
EPA Method 602 Compounds

IEA Sample No.: 237165 7

Sample Identification: MW 9A

Date Collected: June 13, 1990

Date Analyzed: June 22, 1990

By: Averill

<u>Number</u>	<u>Compound</u>	<u>Water</u>	<u>Results</u>
		<u>Quantitation Limit</u> <u>µg/L</u>	<u>Concentration</u> <u>µg/L</u>
1	Benzene	1.0	BQL
2	Chlorobenzene	1.0	BQL
3	1,2-Dichlorobenzene	1.0	BQL
4	1,3-Dichlorobenzene	1.0	BQL
5	1,4-Dichlorobenzene	1.0	BQL
6	Ethylbenzene	1.0	BQL
7	Toluene	1.0	BQL
8	Total Xylenes	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT
Water phase



Phthalates
EPA Method 606 Compounds

IER Sample Number: 237165
Sample Identification: MW 9A
Date Collected: June 13, 1990
Date Extracted: June 20, 1990
Date Analyzed: June 26, 1990

7

By: Joquin

Number	Compound	Water Quantitation Limit µg/L	Results Concentration µg/L
1	Dimethylphthalate	100	BQL
2	Diethylphthalate	100	BQL
3	Di-n-butyl phthalate	100	BQL
4	Benzyl butyl phthalate	100	BQL
5	bis(2-Ethylhexyl)phthalate	100	26
6	Di-n-octylphthalate	100	BQL

Comments: BQL - Below Quantitation Limit



Industrial & Environmental Analysts, Inc.

P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

PCB Summary Sheet

IEA Sample No. 237165 7

Sample Identification MY 9A

Date Extracted June 20, 1990

Date Analyzed June 20, 1990

By Hedrick

<u>Compound</u>	<u>Water</u>	<u>Results</u>
	<u>Quantitation</u> <u>Limit</u>	<u>Concentration</u> <u>µg/L</u>
Aroclor 1016	1.0	BQL
Aroclor 1221	1.0	BQL
Aroclor 1232	1.0	BQL
Aroclor 1242	1.0	BQL
Aroclor 1248	1.0	BQL
Aroclor 1254	1.0	BQL
Aroclor 1260	1.0	BQL
Total Aroclor Concentration	1.0	BQL

Comments

BQL - BELOW QUANTITATION LIMIT
Water phase